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ABSTRACT

The theme of the 1971 meeting of the Council of Graduate Schools in the United States is graduate education in the 1970s: a response to change. The discussions offered include nontraditional graduate programs by Elizabeth R. Foster and Edwin L. Lively; on developing a national philosophy for graduate education by Robert F. Kruh, Donald W. Taylor, and Joseph L. McCarthy; the costs of graduate education by David R. Deener; and evaluation of graduate programs by Robert H. Baker, Francis M. Boody, and John J. Turin. (JMF)

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Proceedings of the Eleventh Annual Meeting

COUNCIL OF GRADUATE SCHOOLS IN THE UNITED STATES

Theme

GRADUATE EDUCATION IN THE 1970's - RESPONSE TO CHANGE

Washington, D.C.
December 2-4, 1971
The Statler-Hilton

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edited by Estelle Mallinoff

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First Plenary Session: Nontraditional Graduate Programs

Thursday, December 2, 1971, 2:00 p.m.

Presiding: Philip M. Rice, *Claremont Graduate School*
Robert Kingston, *National Endowment for the Humanities*
Stephen H. Spurr, *University of Texas*

Introductory Comments

Stephen H. Spurr

The Council of Graduate Schools and Graduate Education, despite all rumors to the contrary, is in fairly healthy condition, thanks to the graduate deans of the country, to the students, and most of all to the faculties. We find ourselves with a slight increase in graduate enrollment in the country — you will hear the details later in this meeting — despite a slight decrease in fellowship support.

The council, under Dr. Page's leadership, is growing. We admitted two institutions today, bringing our total membership to an even 300. These 300 institutions provide 98% of all the doctoral degrees in the country and 85% of all the master's degrees in the country. The council is expanding its operation, is solvent, and has a number of exciting projects underway which you will hear about as the meeting progresses.

Philip M. Rice

The subject of this program, nontraditional graduate programs, is indeed one that is somewhat difficult to define. In fact, it may be irrelevant even to attempt a definition.

In a period of rapid, often excessively pressured change — sometimes change for the sake of change — imposing a framework on the concept of nontraditional programs almost certainly transfers those back to the traditional. Americans in many respects are faddists, and the true American tradition quite frequently relies heavily on the bandwagon approach to change vis-à-vis the other great American tradition, adherence to the status quo.

Neither tradition, however, is apt to come to substantive improvement; thus nontraditional graduate programs, if they are to be defined at all, might be described as those that at least appear to be radical change in answer to popular criticism both from within the ranks of academia and from without. They are not primarily concerned with preserving or improving that which we already have. They are primarily concerned with that which is new.

Developments in Nontraditional Graduate Education

Robert Kingston

In an article in the *Journal of Higher Education* a distinguished officer of this organization, in introducing the discussion of graduate education, remarked (and I think this is almost a quotation): "No one could be more uncertain as to what to think than I." He was a graduate school dean at that time. I know presidents are even more uncertain about academic affairs than deans are, but, nonetheless, I take up the challenge that a president cannot be more uncertain as to what to think than I.

As a matter of fact, I am even uncertain as to my qualifications to talk on this subject. I can think of only one, namely, that I am not now and never have been an administrator, a faculty member, or a product of an American graduate school. And if that is not nontraditional enough, I can only say that the awe I feel before this assemblage is nontraditional for me at any rate.

Until a year ago I was administrator of a grant from the National Endowment for the Humanities to reorganize undergraduate education, and at that time I recall I was very interested in nontraditional study. As a matter of fact, I was very interested in any sign of study at all.

Since becoming just a bureaucrat – and learning, incidentally, that it is very much more blessed to give than to receive – this interest has been sustained and the Endowment has been able to facilitate a number of experiments in nontraditional study at the undergraduate level.

But regrettably there have been no signs of any graduate schools anxious to encourage nontraditional studies. In fact, when Dr. Rice first called to ask me to speak, my initial response was simply laughter – not very courteous but very honest, and that subsided into the question: what nontraditional graduate studies? It was an expletive rather than a question and one for which I do not have an answer: what nontraditional studies?

After the publicity given to changes or would-be changes in undergraduate education, it is easy to conclude that not a lot new is going on in connection with graduate education. There is an increasing emphasis on the seminar and, of course, an easing of the number of required courses. There is a shift to independent study, an easing of the language requirement, and greater student participation in departmental affairs, at least nominally.

Some Ph.D. programs now coming into being reflect new interests in social problems. The Random House *Guide to Graduate Study* lists Ph.D.s in city planning, mass communications, epidemiology, biometry, mental medicine, and, of course, a category called "miscellaneous programs leading to the Ph.D.," which includes Buddhist studies, water resources, resource development, and so on; new subjects, you see, but nothing that we can call nontraditional graduate programs.

The kinds of change that are occurring are occurring most easily in areas of graduate study or interpractical education. For instance, Brigham Young University has a program whereby high school principals can obtain the doctorate in education while continuing on the job. Audrey Cohen's College for Human Service, which started in the mid-1960's as a means of taking women on welfare with high school or grade school education and putting them through a two-year work-study program to get the A.A. degree, is currently being upgraded or may be upgraded to a continuation of this two-year curriculum leading not to the A.A. degree but to the M.A. degree in a period of two years. You may, of course, consider that nontraditional.

There are some attempts to change the delivery system of graduate education. Many of them merely involve a greater toleration for the part-time student and students enrolling after a long absence from the university. C. W. Post College, for example, has instituted the weekend college whereby students can attend for a six-hour weekend over a 15-week period and thus complete a semester of education. There is nothing particularly nontraditional about that unless it be the implication that the student can complete a semester of study in a weekend, which, as a former undergraduate professor, I have never doubted. One other nontraditional aspect of the C. W. Post program, which it learned from American Airlines, is that you can make more money by offering a package deal to husbands and wives. That may be nontraditional in your financial offices.

It is probably safe to generalize that changes in graduate education are primarily occurring at the level of individual teaching in the classroom or at the departmental level. They are responsive to student pressure and they are not necessarily the result of any reconsideration of the purposes of graduate education, or of the standards that it should represent, or of the methods that may be appropriate to achieving those standards and those purposes.

Ironically, that alone may make our "nothing" subject today peculiarly timely, for I suspect that the kinds of exploration of nontraditional approaches which the commission represented by President Spurr is exploring are at the moment primarily matters of interest to undergraduates or would-be undergraduates.

There can be no doubt that these movements toward nontraditional study and the recognition that people aspiring to academic or quasi-academic undergraduate education may perhaps reach their aspiration by nontraditional means will have implications for education in the graduate schools. They will have implications for the kind of teacher we need to produce as the patterns of undergraduate education change and they will have implications because, after all, it is the man who gets his bachelor's degree today, by whatever means, who will be knocking at your door tomorrow. He will automatically and quite rightfully come to the graduate school to continue his education, but he will be many in number and with your limited classrooms and your corridors leading always to the master's or the Ph.D. degree, you may find no room for him there. You may tell him his education is ended, if you are very brave, or if you are not very brave, like many undergraduate educators caught in the sweeping wind from Yellow Springs, you will give him the prized academic degree for exercises with which academia has very little to do, and neither you nor he will be satisfied unless, of course, we begin to think that graduate school, too, may be nontraditional in its methods, may enlarge its view of traditional ends, and may paradoxically thereby affirm perhaps even more competently than before its supposedly traditional standards.

The subject should be seen against a background that is marked by four salient features. The first is the rate of unemployment among competent, fully doctored young teachers, which would have been unthinkable 10 years ago. Second, the number of institutions offering graduate training is increasing at an astonishing rate. Third, there is a proliferation of subject matter within the graduate school. And fourth, of course, omnipresent these days, there is the continuing mistrust among the young, directed toward established patterns, established standards, and traditionally accepted goals of the establishment itself.

Of these four features, the first two are demonstrable; they can be measured; they can be charted. The first one is a subject too depressing to dwell on; I will skip that.

Regarding the second feature, Mayhew in his *Graduate and Professional Education in 1980,* a Carnegie report of last year, suggested that number of doctorates conferred may rise from approximately 26,000 in 1969 to 70,000 in 1980. The Newman report found those figures somewhat exaggerated, and there are already many indications that the projection may well be somewhat too high, although the elevation last week of some of the California State colleges to the full dignity of the university may swing the pendulum back the other way.

The third feature, the enlarging of the subject matter of the graduate school, is also demonstrable if we look at the listings of the various institutions. It will probably continue growing. After all, one man's pleasure is another man's Ph.D., and that is what the graduate school exists on.

The fourth feature, commonly called "student unrest," although it is not as easily measurable as the others and it sort of expands to suit the individual tastes like the centerfold of *Playboy*, nonetheless, exists and many of us on campuses know that it exists.

Just a couple of weeks ago the American Council on Education reported the astonishing statistics that 38% of all graduate students and nearly 45% of those in the humanities, the mathematical, and the physical sciences find their graduate education irrelevant. As a matter of fact, 8% said that they wished they had never gone to graduate school at all.

These are the features and the background against which nontraditional study in the graduate school has to be considered if you are anxious to consider it, and I think you should consider it for it is not unreasonable to assume that these four features are related one to another.

An increase in the number of graduate schools and graduate students may lead to an increase in the kinds of materials that they wish to study. That may lead to an increase in the number of Ph.D.s and also in the number of unemployed, even perhaps unemployable, Ph.D.s, and that may lead to increasing frustration on the part of graduate students. The root difficulty is simply one of numbers.

At a recent meeting of the Association of University Research Administrators, one participant quite plaintively recalled the time when the high school diploma was the *desideratum* for every young man. Now, he pointed out, it had to be a B.A. for everybody and he asked, "When will this process stop? When college education is almost universal, then will everybody aspire to a graduate degree?"

This is not an outrageous question, and it is one we should not fail to notice. There may in fact be some sort of Parkinson's law requiring that fixed proportions of the population will always rise and aspire to the next unavailable degree. Perhaps that is a Platonic law. Some of the figures I quoted suggest that this will be so, and in a sense we cannot complain if it is. It is a sign of success for those of us who have taught at undergraduate colleges as well as those of us who now write congressional presentations for National Endowment and who have always claimed that our goal is to encourage the love of ideas and the desire to learn.

Advanced education, education beyond the bachelor's degree, clearly then is not a bad thing (*a*) provided that it does not fail to train people for the kind of work that society will call on them to do, (*b*) provided that it does not train and qualify them for jobs that it cannot offer them, and (*c*) provided that it does not, by the scope of its operation, abdicate from its responsibility and fail to maintain those professional standards which it is the task of the professional school, the graduate school, to affirm and maintain.

These three provisos are desperately important and I would like to spend a moment on them. I will take them in reverse order because the last one, the matter of standards, is a little delicate and I would like to be rid of it quickly.

That education for all might be education for none is something that has fortunately, and quite properly, not been given much heed by our society. The training of minds for critical thought, that is, the training of the individual for creative citizenship, is the function of high school and undergraduate education. It matters little that one school might be a little less rigorous here; one student might be a little more devious there. By and large, undergraduate education serves its purpose, but the problems are not quite similar in the graduate school.

The graduate school at its highest level is a professional school that certifies the achievement of professional qualifications. The goal toward which it works, the doctorate, is a clear and narrow one. It provides not merely experience, which is educative, but also clear, purposeful, academic experiences. And it certifies in the last resort only the achievement of particular abilities.

One of the frightening statistics which you can pick up these days is the increase in the percentage of doctorates among degrees given. The projection is that with current enrollment patterns, in 1979, 3.8% of all degrees awarded will be doctorates as opposed to 2.1% in 1960 — and we have unemployed Ph.D.s today.

One wonders what new methods of appointing fresh young faculty members from these swollen ranks of Ph.D.s chairmen will decide upon. I can see the chairman on his annual pilgrimage sniffing one after the other as one does fine wine, "Harvard '53, not the best vintage, palatable with a small liberal arts college perhaps, or Berkeley, '68, a spicy brew not for the conventional palate, may mature with aging." This sort of thing.

It is lamentable that the Ph.D. has become a work ticket, but it would be much more lamentable if it were no longer even valid for that, and it would be even more regrettable – which was the first of my provisos – if in so training our graduate students we failed to provide them with the kind of education that our society genuinely needs.

If this is the moment for considering nontraditional study at the undergraduate level and if this makes it appropriate to reexamine the nature and purposes of graduate education, then I think before we consider introducing nontraditional study to the graduate school we must first thoughtfully ask ourselves the questions: For what does the graduate school propose to educate? What will be the needs of our society?

I am not even going to presume a suggestion or even the beginning of an answer to those questions, although I could hint at some steps that National Endowment has taken to encourage very well doctored professors to move from the campus into other, more creative educational activities, but I am not going to take the question any further because this has all been a preface to the consideration of nontraditional graduate studies.

From the foregoing it should be clear that I think we can anticipate a sharp increase in the enrollment in graduate education during the coming years. I think it is clear that we should not expect to produce, in fact should not try to produce, an increasing number of Ph.D.s commensurate with that increase.

It is also clear that not all those in that current enrollment will have their interest in pursuing traditional courses of study by traditional means to traditional ends. Yet it will be the responsibility of the graduate school to serve all of those baccalaureates pursuing all of their ends in all of the different ways, without at any point relinquishing its traditional responsibility for the affirmation of standards associated with the advanced degree.

My assumption is that there is a variety of purposes for which a student in the future may want to go to graduate school, ranging from the traditional Ph.D. student to the adult who simply wants to continue his education in fields of his own interest. The latter is thought of traditionally as the hanger-on of graduate school who is expensive on faculty time and money.

This may be an appropriate time to rethink the assumptions behind this designation and perhaps acknowledge that one of the purposes of the university, including that part of the university which caters to those who have completed their bachelor's degree, is to serve more adults who have received higher education, to provide them with what is called life-long education. The question with which we are confronted is, how will the university be able to accommodate within it such a plurality of groups with different motives and different purposes? And the answer is reflected in the title of our panel: Nontraditional Study Within the Graduate School.

We should note first that when we talk of nontraditional study we really refer to one or several of three things: nontraditional subject matter, nontraditional methods, and nontraditional structure.

Nontraditional subject matter is by definition something that defies definition so I can get away with that one. It is apparent, however, that if we view the university graduate school not merely as a place where one may come to learn how to be a medical doctor or how to be a scholar of history or a scholar of the classics but rather as a place where those who have achieved the level of general competence may gather to explore such intellectual studies as are relevant to their own lives and interests, then we shall see that there will be a proliferation of new subjects and a proliferation of new complexities of subject matter.

The practice whereby our graduate schools have trained budding young historians to train budding young historians to train budding young historians is not entirely satisfactory. The relationship between the practical need and the resources of knowledge has not always been remembered. Some of our graduate schools some of the time have provided narrowly vocational training even in their humanities departments. The well-trained graduate student has often been trained to teach his subject, which means what he was taught, and so he refers to "my field," "my subject," "my period," "my department," and even, God help him, "my student," like a feudal lord about to exercise his *droit de seigneur.* This may have to change.

There is a need for something nontraditional in our graduate schools. Undergraduate schools may introduce new and nontraditional subject matter not only because knowledge proliferates but because the university's traditional socializing function grows increasingly important. As other institutions, the family, the church, etc., in our society become less effective, the university is conveniently an institution to which more students may go in their search for a place that affords them intellectual stimulation, and it is ideally an institution in which they may achieve a sense of belonging to an ongoing enterprise, either distinct from their work or ancillary to it.

So much for nontraditional subject matter. For nontraditional methods we need say very little. Fortunately, it is of the essence that nontraditional study be determined by the nature of the participants, their goals, and the available resources. The university is not yet required to fossilize nontraditional studies as it has those of a more traditional nature over the past 100 years.

We may leave to the wisdom of our future graduate students the methods which they will introduce in coming years. We may leave it to their wisdom provided that we are sure that they will not, of their nature, subvert our standards and deflect us coincidentally from our professional goals.

And so it is the structure of the graduate school and the change in traditional structures that may accommodate nontraditional study to which we should address our most serious attention. We posited a graduate school that embraces new subject matter and new methods of learning, that may accommodate students anxious to acquire a Ph.D. by methods as yet undevised and students who merely want, by some method, to continue their education to a level that satisfies their professional or personal ambitions. In what manner can the graduate school ever accommodate such diverse clientele? It certainly cannot within its present structure.

It makes no sense at all to talk about nontraditional studies in the graduate school unless we can first change the structure of graduate education. The single strongest impediment to the future development of the graduate school is our present pattern of courses, credits, and grades. It is a disciplinary pattern appropriate to the law school; it has been set uneconomically in the colleges for years; and it is still in the graduate schools although it was never necessary.

Our graduate schools are the authority for determining the professional and the intellectual standards of the country. I hope these standards will be maintained, for it is more important than ever that they should be.

Perhaps other standards for other students may need to be established. If this is done, then the graduate schools may become not a last fortress against nontraditional studies but the source of ideas and an experimental laboratory for nontraditional patterns of education.

If a primary task of the graduate school is to define its purpose, to describe its standards, and to maintain those standards by devising satisfactory instruments of measurement – and this is a purpose of the graduate school – then it has another purpose: that of educating, which should not be confused with the teaching or grading of courses. It is rather, to put it more descriptively, a purpose of the graduate school to provide the opportunity that people need to reach the standards defined by the graduate school. For the university is a resource. It is a resource of books and people, and sometimes laboratories. It is an academic community and an academic environment. The professor is part of that environment. He is a resource, as the library is a resource, and as such, then the university is a place where ideally student and professor may meet together, because of conjunction of mutual interests.

What I am suggesting if it is not already clear is that the time may have arrived to eliminate the connection that now exists between the teaching and examining functions of the university and perhaps to eliminate the required graduate program and view the university instead as a place that affords some kinds of learning opportunities for those who wish to continue their education.

The crux of the matter is this: If one knows what standards he wants to achieve in awarding the Ph.D. or any other degree, then new modes of study are not threatening. If one is sure of his standards, one may be receptive to new modes.

Essentially, this is a plea that the university become less narrow and include groups with different purposes and the new subjects that interest them. It is a plea that the university trust these students to be serious and give them the leeway to develop the means of study. But it is a conservative plea that the university become conservative in defining and insisting upon proper academic standards. It is a plea that recognizes that only some educative experiences are academic and must be measured academically. It is a plea that the university not pour promising students into the same mold. It is a plea that the university be able to admit students freely and graduate them only upon special demonstration of remarkable ability.

Ezra Pound once said that a nation which does not encourage a lively poetry will die at the top. I have been a professor of English too long to think of the legislative power of poets as being all it is cracked up to be, but I do think that a nation that does not care for the treating of its graduate students is probably sadly misusing one of its most useful resources. I like to think that the care and feeding of graduate students can change as readily as the news, or as readily as the care and feeding of infants, for that matter, in response to new discoveries and new needs.

To insist that graduate schools can teach only their traditional subject matter in a traditional way within a traditional structure may not be absurd, but it is not responsive to the socially changing needs of our country. To insist that our graduate schools may teach new subjects but only in old ways and within an old structure is both absurd and socially useless.

The graduate school has always represented something that I believe in. We always need to train an elite, oddly enough, any number of elites. Be they football stars, college students or graduate school deans, we do need them and I believe the graduate school must maintain itself to do so. But we must train vastly more than an intellectual elite and the graduate school can do that, too. The graduate school can offer the confirmed B.A. to a graduate of Bryn Mawr 20 years later just as it can start educating its future graduate dean the moment he graduates from Harvard.

Both can be done economically if the university is prepared to rearrange its resources in patterns that are nontraditional. A pattern that can accommodate nontraditional study without threat to its standards is therefore all I suggest, a pattern in which standards and means of certification are precisely defined and in which therefore the library, the work program, the home, the television set, and the classroom are all equally acceptable but unmeasured means toward the acquisition of knowledge and understanding, and the graduate school in which finally the faculty then becomes what I believe it ought to be: the heart of the institution as a place of intellectual discourse and a means of socialization.

The triumph of our country as a whole – and it does have some triumphs – is that it has made resources available, not that it has ever dictated the way in which those resources should be used. This is the pattern that has enabled the country to discover and use the best of its talents while at the same time remaining a fairly tolerable place for both the elite and the ordinary.

The graduate school has not accustomed itself to think of the ordinary. It is unlikely to have to do so in the future. The ability to nurture both the ordinary and the elite does not come easily to our society and may not come easily to the graduate school any more than it did to the undergraduate school.

George Elliot pointed out that we are a little afraid of the ordinary and the familiar, and it would be like hearing the grass grow or the squirrel's heartbeat and we would be deafened by the roar that lies on the other side of silence. Our undergraduate colleges were almost deafened by the roar of the 1960's. I like to think that the graduate schools in the 1970's will not be.

Nontraditional Study: Opportunities for the Graduate School

Stephen H. Spurr

The educational world today is afloat with such terminology as "the university without walls," "the nonresidential college," and "less time more options." These terms, and many others, for want of a better name can be grouped under the title "nontraditional study" and are, as you know, the subject of attack by a Commission on Non-Traditional Study under the chairmanship of Sam Gould.

I speak to these matters not as an expert but as an interested and enthusiastic amateur who is being indoctrinated as a member of this commission, and also as a long-time graduate dean concerned with problems arising from the artificial distinctions which Dr. Kingston has drawn so well between collegiate and continuing education, between residential and nonresidential education, and between baccalaureate and postbaccalaureate studies.

One of the great contributions of American higher education is that it always has been open-ended in the way it has been open for the motivated student regardless of his previous track record. In Europe only too often the roads divide unalterably with performance at various examinations at various stages of life. Failure at any one of these several examinations may well lead to a permanent lower track career choice. In this country, all of us can find a college track offering a second or third chance at any point in our careers. Many of us have, and have ended up with a doctorate after initial failure at some earlier point. In a real sense, therefore, we already have broad opportunities for nontraditional study ahead of us.

Here all of the components of nontraditional study have been present for a long time. Extension service courses off-campus, educational radio, educational television, correspondence study, remote course study by television and two-way audio communication, independent study for college students, computer-assisted instruction by remote terminals, and even external degrees have in some measure always been a part of our educational system. It is perhaps ironic that the rebirth of national interest in the subject of nontraditional study has occurred at a time when state legislatures and other funding agencies are becoming increasingly insistent that adult students pay their own way and increasingly chary of supporting such university ventures in continuing education as the extension service, educational radio, and educational television. If nothing else comes from the current movement, perhaps the rediscovery will result in refinancing.

Also important in the present rebirth of interest has been the explosion of new projects in the English-speaking world dealing with the subject of nontraditional study. We have had a substantial number in this country basically following the models that have evolved in England where we have long had the external degree programs of the University of London and where the opening of the "Open University" last year in that country has revitalized the thinking of nontraditional study. In this new university, students past college age are chosen by random processes on an open admission basis and are given the opportunity of earning degrees through a combination of media including correspondence, radio, television, and localized counseling. Although the Open University meets a quite different need in an entirely different educational system, it is notable that continuing education is this case is degree oriented and is academically controlled rather than being constructed on a demand basis. It is also notable that it is based on the use of many media of instruction rather than on one or two.

It was with this background that the Commission on Non-Traditional Study was organized this year. It has already met three times. My own concepts of the function of this commission are embodied in a draft I prepared for the Subcommittee on Concepts. The thought of our subcommittee was that the goal of nontraditional study should be that every person should have available to him or her opportunities to learn at all times and that everything possible should be done to remove barriers based on age and individual circumstances so that the progress of each individual would be limited only by the individual's intellectual capability and motivation.

Dean Rice has already pointed out that the term "nontraditional study" is negative and can be defined only in relation to the affirmative "traditional study." Admitting that any definition must be arbitrary, I suggest that traditional study should be identified as having four characteristics. First, traditional study is aimed at the college-age population, essentially the 18- to 24-year-old age group. Second, traditional study is beamed normally at a selection of that population, whether chosen on the basis of prior academic performance, test performance, or by assorted random processes. Third, traditional study is based on a structured learning environment, that is, the college campus. Fourth, and finally, traditional study is concerned with conventional academic programs, and the futility of following this definition has already been explored by my predecessors.

So it follows, in line with Dr. Kingston's comment, that nontraditional study is anything other than traditional study. I have already pointed out that there is very little new to this. Almost all of the potential student groups have been the target of educational programs of one sort or another. Almost all types of educational media and technologies have been the subject of experiments. Nevertheless, we are dealing to a considerable extent with myths and not with facts. Furthermore, there is an important task before us in packaging and labeling. Our problem is not only to develop nontraditional study opportunities but to make them socially desirable and accepted. To do so, programs of nontraditional study must be endowed with as much rigor as parallel aspects of traditional study, and this indeed was one of the points that I drew from Kingston's comments. And I would draw from that the conclusion that there is value in traditional institutions such as colleges and universities getting involved in the nontraditional studies even though their major functions may be performed by new types of educational institutions.

Coming to the issue of target populations, there are obviously many types of people who are not adequately served by traditional study. These would include the isolated educated person, whether he or she be isolated for reasons of geography, local environment, or personal limitations. I would include in this group the person living in both rural areas or overseas, the individual separated from his peers, and any individual who may be isolated for physical or mental limitations. The second group contains the underemployed person, whether an individual serving in the armed forces, a member of a minority ethnic group limited in his job opportunities, or the housewife involved with raising a family of school-age children. The third group includes those with underdeveloped talents: the environmentally or economically disadvantaged students of all ethnic origins. Obviously these groups are neither mutually exclusive nor together are they totally inclusive, but they do identify some of the target populations who may be reached effectively through nontraditional study.

I would suggest to you that the emphasis of nontraditional study should be upon academic roles and academic programs, not upon the media or methods of education. Our function as graduate deans and as educators should be to suggest particular types of academic programs, whether traditional or not, for which there is a market as identified in a target population, and then to develop organizational patterns and technologies by which these academic programs may be brought to the population in question. In short, media should be adapted to academic programs, not vice versa. Similarly, academic programs should be appropriately identified and labeled with appropriate certifications, such as college degrees. The point is not to offer a degree and then find a program that will fill it, but to identify a desirable program and then to label it properly.

In translating these concepts into university organizations, it seems to me—and again, I am going over ground that has already been explored—that new organizational channels or patterns aimed at developing a more committed and continuous input of our university faculties must be developed, and they must be designed to bring together and coordinate the various media already available in our university structures. I personally like the idea of a coordinated "external program" in which the conventional faculties work together with the extension service, with radio, television, and other agencies of the university in providing nonresidential programs on a broad and varied basis.

My concept of the nontraditional outreach of the residential university embodies a separate nonresidential college with its own dean and faculty, with some of the faculty being full time and others being shared with the traditional colleges on campus. Such a unit would offer degree programs both on a course basis and on a credit-by-examination basis. The faculty would reach its students through correspondence assignments, radio, television, computer, live lectures, visiting counselors, and short-term workshops offered both in slack times on campus and generally around the region. Credit for courses would be interchangeable with that of residential courses on campus. In fact, classroom pressures on campus might well be relieved by providing the alternative of independent study plus credit by examination.

I find myself an enthusiast for expanding our educational outreach through increased use of new media of instruction, independent study, and credit by examination—not to replace but to supplement traditional learning processes on campus. At the same time, I find myself becoming increasingly conventional as to my beliefs in the validity of academic degree structures, intellectual rigor, and a program of accreditation.

In this sense, let me close with the following.

Do not assume that independent study will be less expensive than traditional residential study. The costs of providing individualized access, counseling, and evaluation may well offset the costs of providing facilities for group instruction.

Do not overestimate the demand for education. More people will continue to watch football than educational television. More people will continue to listen to rock rather than to Bach. Most of us would prefer to talk rather than to listen.

Do not underestimate the attractiveness of traditional liberal arts programs for the nontraditional student. The content of liberal education changes constantly, but the desire and need for it remain constant.

Do not underestimate the motivation toward accreditation through academic degrees. Most people want degrees. Most people enjoy working for them.

Nontraditional programs will be accepted only to the extent that they are clearly as rigorous and as carefully supervised as traditional programs. I do not mean to imply that we should continue to teach the same old subjects in the same old ways. English can be focused on modern idiomatic literature and remedial training as well as on Walter Pater or Jane Austen. The language of the computer has as much internal rigor as that of Euclid. Problem-oriented emphasis on social problems can be as exciting and as basic as conventional sociology, anthropology, and psychology. I do believe, therefore, that only rigorous intellectual exercise and training will be creditable and only that should be accredited. Talk sessions are fine recreation but they are no substitute for learning. Vocational and technical training are important and should be provided, but not in our graduate schools. There is much to be gained from the nontraditional movement, but in doing so we should be careful to retain the intellectual quality control and the intellectual vigor of our graduate schools; we should focus on subject matters and target populations and not on the methodology; and we can use this trend effectively in moving graduate education forward in the years to come.

The Commission on Non-Traditional Study is essentially concerned with undergraduate programs. By agreement, the Council of Graduate Schools in the United States jointly with the Graduate Record Examinations Board has agreed to establish a parallel Panel on Alternative Approaches to Graduate Education. It will work closely in conjunction with the Commission on Non-Traditional Study and will provide a major input into this process. Our President, Boyd Page, will be the chairman of this panel, which will be jointly appointed by the two graduate groups and funded by the Graduate Record Examinations Board. It will, I believe, keep CGS involved in the forefront of this development, wherever that may be.

Discussion

Dr. Benson, Defense Department: I have probably been in the academic world longer than most of you here, and am going back to it shortly, so I think I can speak as an academician, too. I was very much interested in both talks, especially in Dr. Spurr's, and I want to say something about a specific example of what he was talking about and a problem that grows out of it.

We run, I suppose, one of the largest adult education programs in the world. At the graduate level we have probably got 50,000-100,000 course registrations with probably at least half if not more of the institutions that are represented here today.

But we have a constant problem because our people move around and as they move, you all are so suspicious of each other's integrity that you just will not give them credit for what they did at another institution.

There are institutions represented in this room that offer programs with us that are good institutions but really not clear at the very top of the academic world, whatever that is, that will give no credit whatever for any graduate course taken at another institution on a one-year master's degree. There are institutions that give 6 hours of credit. There are institutions that give 8, 10 or 12. An officer starts to take a program at a perfectly reputable institution when he is stationed in Europe. He comes back to the United States and is assigned to a base somewhere; another perfectly reputable institution is located at or near his base, but he just cannot transfer his credits.

Frequently we have another situation. Here is a lieutenant-colonel who has pretty much made his way in the world and he starts taking a course that one of you are giving. He finds he is getting a B or an A average in the course but when he is two-thirds of the way through you throw him out because you have just received his graduate record exam that was taken three years before and that was too low for you, or you found that he had some low grades in his freshman year in college, 12 to 15 years before.

This all does not make very much sense, and I do not think it fits with the goals that Dr. Spurr so much outlined. My plea to you is, try to have some faith in one another. You are all pretty good institutions—you really are. You have competent people. But try to recognize that the folks who move around have to move for economic reasons. And it is not just the military; there must be a civilian movement that is far greater than what we have. Try to get your faculties to ease up on these transfer regulations.

I would like very much to see this council set up a committee that would outline what might be a reasonable transfer policy, and I think if such a policy were set up, in due time most of you would begin to follow it as you already have in the case of some other educational committees.

But here is a place where you have lots of people who really want to learn. We have 700 or 800 Ph.D.s each in the army and the air force. We have many thousands of people with master's degrees. Degrees are important to them, Dr. Spurr. You are completely right on this.

These men are going to have to make a major shift in life, and this degree means something to them, but they cannot get it until the universities recognize each other's achievements.

Dr. Rees: Dr. Benson referred to the military. This is particularly important vis-à-vis women, and women at the undergraduate level and women at the graduate level have the same problem with moving around, so I would like to urge that we do follow up on what Dr. Benson suggested and try to get some policy that people will pay a little attention to.

Years ago I was urging undergraduate women's colleges to try to identify the colleges that were similar to one another and arrange for a better acceptance of transfer credits, and I do think that at the graduate level there is a sort of built-in similarity. I do not mean to say that we are all the same, but there is a standard that all the members of this group have accepted and I really wish that we could try to establish for the Council of Graduate Schools some point of view that would make it possible to break this rigid scheme that we have that says, "No, my institution, which is not as good as Harvard, will not accept Harvard's credits under certain circumstances." I think all of us are faced with that kind of problem and I wish we could address ourselves to it.

Dr. Barker, University of Alabama at Birmingham: I would like to make a plea to Dr. Benson and the armed services. We have had some experience with training people both at the master's and the Ph.D. levels at our institution who have been referred to us by the armed services, and one of the real problems is that they seem to be hung up on insisting that the people move.

We are not hung up on accepting transfer credits. In fact, we were accepting more than six hours back when we were not supposed to have been, but we have found ourselves unable to work out a program of study even at the Ph.D. level because we do not know how long these referred officers are going to be with us. We tried to be innovative but they are simply unable to complete even a major research problem which we still think is the basis for a Ph.D. in the biomedical sciences specifically.

Benson: We agree there is too much turbulence .personnel turbulence as we have it. Unfortunately, there are problems. When the President of the United States suggests a different program, our people have to do it.

Dr. Alpert: I am really preoccupied with the notion that we can reach out in truly different ways and yet really do something using the same pipeline that we have used for 100 years, never subtracting any of the pipeline but adding occasionally a new subject matter, as Dr. Kingston indicated in saying that we are somehow going to generate new traditions, new kinds of people, and new kinds of standards.

Now it is one thing to say the standards are high, but how do you establish different standards that are equally high if the faculty of the English Department still divides itself up by centuries, and if the faculties of the liberal arts or the humanities and the fine arts never talk to the people in engineering?

Sure, they have a program that says you have to take two courses across the street but that does not change the pipeline at all. The pipeline is that of being an apprentice to a professor who was before that an apprentice to another professor, and almost nothing has changed in a whole career.

A man starts life as a professor of physics or of economics at age 26 and 40 years later it is expected he will still be doing the same thing. I just do not see how we can have nontraditional programs *until* we break out of a pattern that maintains the pipeline intact from one generation to another and a generation which is unique in our academic world that lasts a full 40 years and stays the same from one to the next.

Dr. Kingston: I think the point is very well taken and my thinking is much along those lines. What Dr. Spurr and I were both talking about was not necessarily establishing new standards, although in fact it may be necessary to establish standards other than the Ph.D. for those who want graduate education, but not to the Ph.D. level. Our concern is whether to say the standards are there, and our current traditional professors, as you call them, do affirm and represent those standards and must evaluate them. And after all, there is a certain age at which everybody stops changing. It is usually about the age of 21, I think. But it is sort of a structure that I suggest as one example whereby while the standard remains there established by a traditional professor, nonetheless, through the availability of nontraditional study, we may allow our up-and-coming graduate student to follow a different pipeline to that perfect goal.

Let us not pretend that the goal is not perfect because you will never get a majority vote in favor of that. Let us accept that it is perfect but simply provide that there may be something to do other than to sit in those classrooms. If those to whom we award our doctoral degrees have indeed developed and proven by their comprehensive examination a comprehensive knowledge of the subject matter, if they have achieved a crystalline view of their subject matter in its relationship to other human enterprises, if they have been able to use their knowledge imaginatively in producing their theses, then it is surely unnecessary to say, "We will not give you your degree in spite of your ability to achieve those ends unless you have sat beneath the glare of our classroom lights for so many hours and therefore, have become thoroughly indoctrinated."

One program which the Endowment has supported is the National Humanities Series, which some of you may have encountered. It is a means of getting fully doctored professors out of the academy in company with one or two actors perhaps into small communities where the local citizenry have no access to either educational or cultural institutions and to give what I suppose is an illustrated lecture on some problem of current concern, using their wisdom and their knowledge, to be sure, to illuminate that problem in a way which can intrigue the local citizens. It has not been too easy to find such professors but we have found them. They come mostly from the ranks of the associate professors or the assistant professors, although there has been some interest elsewhere.

Now it suggests to me that it is possible to develop a nontraditional professor by retaining absolutely our traditional standards but allowing a certain freedom in the means of achieving those standards and never confusing the means with the end.

Dr. Rice: I am not so sure that I know about this business of the young professors. I suspect if you waited until enough professors were old, so old—until they had forgotten everything—you might also get it.

Voice: I am not so concerned about persuading traditional professors that there are other means of providing education for people. In fact, I have found it rather easy to interest professors who are regarded as traditional by their colleagues to use their imagination in this area.

One thing I think perhaps the Commission on Non-Traditional Study might do to help us, and that would be perhaps through indoctrination or propaganda, is somehow to begin to excite society to a little more interest in the possibility of learning in these ways.

I think that the people who would benefit from these nontraditional ways should expect to pay for them themselves, yet this kind of thing is quite expensive. One of the problems of a single university in launching an effort of this kind will be to fund it. I do not think the money should come from foundations and government; it should come from the people themselves, and it is pretty hard for a single institution to excite an entire community to a level where it is ready to buy something.

Dr. Watson, Virginia Commonwealth University: First, I might say I am a nontraditional dean. I am a dean of a School of Basic Medical Sciences and graduate studies. Some three or four years ago it was obvious that there was a need for, in addition to the traditional Ph.D. degree of chemistry, physiology, administration and so forth, M.S. degrees in nursing, physical therapy, and medical technology.

We were the right size, there was a demand for this, and we had the competence to do it. Now how do you do this? Well, we went to work on it and I must say it took 12 months of pretty vigorous discussion but we eventually resolved it and took these three programs under our umbrella. They are all prospering and moving ahead. And I think the real clincher here, Dean Alpert, is that I also happen to be the budget officer for these programs.

Dr. Stokes, University of Michigan: I certainly recognize the reality in terms of a good deal of graduate education of the kind of image you convey of this terribly passive process of bringing students into a classroom, indoctrinating them, and so on. And it is equally possible to give the sort of depressing account of that that Dan Alpert has suggested. Yet I do have the feeling that there is something terribly valuable and much more active and creative then what is found in the residential experience of a good many graduate students in our graduate departments.

It is a remarkable achievement that we can take people that have had the overwhelmingly passive experience of the undergraduate years, bring them to graduate study, have them in some sort of close-relationship with figures of an established field or discipline, and bring forward in them the capacity to solve problems that they in fact in the better cases achieve.

When I hear the officers of our extension service at the University of Michigan suggesting in particular that since graduate study is meant to be independent study, we should be even more prepared at the level to give credit for study that is done away from the university, I wish we knew more about the essential values of bringing students to a residential campus, having them enter into graduate instruction with major figures in the field, and gain this capacity to create, and I would be interested in hearing Dr. Kingston speak about this.

Let me just append the remark that I hope that this complementary commission on nontraditional graduate study can in some way go to the heart of this sort of question.

I think there will always be a value in the residential graduate school as there is in the residential college which cannot be met by any other form of study, and I know no way around that.

I was not attempting really to knock the graduate school. It seems to me totally admirable that you can bring young graduate students into a close working relationship with professors. My concern is that in many graduate schools, particularly urban graduate schools with an increasing number of graduate students that simply does not happen. And it does not happen because graduate education then becomes a continuation of college education, which is a continuation of high school education, which really is a classroom form of instruction.

My only concern here is to say there are standards and it may be that by nontraditional study outside of the universities some students will surprise you and turn in theses which are every bit as good as that of the man or woman who has been sitting in close contact with his or her graduate professor. Let us allow for that and let us at the same time relieve our distinguished professors of the awful burden of going into the classroom so often, of reading papers which frankly are not terribly imaginative because they are written by rule, of grading examinations which tend to be recapitulations—now I am talking about the cross-examination, not the comprehensive.

If we can do that, there may in fact be even more opportunity for those who are fortunate enough to be in residence to have close contact with their graduate professors. What you have to guard against of course is if we relieve professors of some of the so-called teaching load; that is a gross exaggeration. They will spend even more time in research and less time with their graduate students, and this is not what we are after. But I do agree that while some nontraditional students may reach required standards, they will always be at a disadvantage.

Second Plenary Session: Programs for Students Not in Full-Time or Continuous Residence

Thursday, December 2, 1971, 3:40 p.m.

Presiding: Edwin L. Lively, *University of Akron*

Elizabeth R. Foster, *Bryn Mawr College*

Introductory Comments

Edwin L. Lively

This Second Plenary Session of the Annual Meeting of the Council of Graduate Schools is devoted to programs for students not in full-time or continuous residence.

Before beginning the formal part of the program, one of the advantages of having the microphone, I guess, is the opportunity to make remarks about some thoughts that came to me during the first session.

I think all of us as we sit in the audience think thoughts that we do not want to go to the microphone necessarily with, and yet maybe we feel they are pertinent.

In listening to Dr. Kingston, I was struck by the comment he made in the beginning that he had never been an administrator or a graduate dean. It seemed to me that many of the problems that arise in approaching nontraditional graduate programs, at some point, will run through administrative procedures, and I think those of us who have had some experience as graduate deans can see some very real problems in this area.

I am not sure how to refer to Steve Spurr, whether as president or chairman-elect or ex-dean or what, but he made one remark that disturbed me. He said that these programs should have their own deans. It seems to me that there are too many deans floating around campuses now. At least that has been my experience.

I did feel that the discussion of nontraditional graduate programs which preceded this session was not very far removed from the topic of this second session, and those of us who are involved in fairly elaborate service to part-time and noncontinuous-residence students are in a sense providing the nontraditional programs, at least in part, as they were discussed earlier.

So I think that many of the remarks this afternoon will have some bearing upon the first session.

The agenda consists of two presentations, the first one by Dean Elizabeth Foster of Bryn Mawr College and the second one I will give.

The Non-Full-Time and Noncontinuous Students

Elizabeth R. Foster

The part-time student has been so long and so skillfully concealed in that great melting pot known as FTE (Full Time Equivalent) that when we go to look for him he is very difficult to find. There are, in fact, so few significant studies of this poor relation of the academic world that perhaps it will be useful to present a case history of our experience at Bryn Mawr.

When the college opened in 1885, it offered the first graduate program for women in the United States. Its first degree, in 1888, was a Ph.D. Lest the federal government look at us with a disapproving eye, I must quickly add that the graduate school had admitted men since the 1930's. Now if you start out on such a radical course as offering higher degrees to women, almost anything can happen. We discovered, along the way, that many well-qualified candidates were unable to devote *all* of their time to graduate work. Some were women giving a substantial portion of their time and strength to their families; some were local teachers (men and women) who could not afford to resign their jobs (nor, indeed, could we afford to support them). We saw no reason why such individuals, of excellent caliber and high motivation, should not be enrolled for graduate training – part-time students, we said to ourselves, are certainly people.

Over the years we have found that many of these *people* add an extra dimension to our seminars. We like the mixture of ages and of experience, both in the teaching world and in the community.

You would not, I hope, expect us to operate on a double standard and we do not. All our students are admitted under the same criteria, all our students are trained under the same faculty, and all select their seminars from the same program of study. The only difference is the number of academic units for which each registers – some for full time, some for less. All must meet the same standard of quality and all work for the same degrees.

We set a time limit of five years on a master's degree – the control of the Ph.D. is more flexible. If more than five years has elapsed between the first general examinations and the final (more specialized) examination on the dissertation, the candidate must be reexamined in a general field. Many students need considerable leeway to complete their work but we must, of course, insist that their skills and knowledge are not allowed to rust in the process.

I would like then to suggest to you:

1. That the part-time student can and should meet the same standards of quality that all of us have long demanded of full-time students.

2. That part-time students are interesting students who contribute significantly to the graduate school community.

3. That a flexible program which recognizes that part-time students are people is particularly appropriate for women at several stages in their lives.

4. That the same sort of program is useful for men and women who wish to continue their professional training after they have undertaken major family or community responsibilities which cannot be relinquished.

Funding the part-time student is sometimes a problem. Normally major fellowships and grants require a full-time commitment. Few provide a living wage for more than a single individual and none provide for replacing one's services on the home front or elsewhere. Federal and state loans are available only for those who register for at least half-time work. Would it be useful to rethink these policies as the Carnegie Commission, certain graduate schools, and the National Science Foundation are already doing?

We at Bryn Mawr have found that relatively small sums, to assist with tuition, go far. Major living costs are often covered in other ways by the individual's own direct or indirect earnings. It seems logical – when academic budgets are slim – to assist students who are already employed rather than to look for jobs for them. It seems sensible, when teaching experience is such an important part of a graduate student's training, to provide additional professional education for those who are already teaching. It seems useful to broaden our vision of graduate students to include not only that paragon (preferably male) who proceeds uninterruptedly from A.B. to Ph.D. in four single-minded years, but also a larger variety of people (male and female) who move to the Ph.D. no less surely but according to different patterns.

Blessed Be the Part-Time and Noncontinuous Graduate Students for They May Inherit Graduate Education

Edwin L. Lively

I am not aware of any studies that might help establish some testable propositions concerning the frequency, substance, and interpretations of the dreaming behavior of graduate deans. In fact, I cannot even offer support for the hypothesis that they dream at all, except that such behavior is prevalent among human populations, and most graduate deans can present at least limited evidence to support a claim of humanness. Therefore, the following description of a frequent and repetitive dream of graduate deans is offered as an educated guess with only tangential and inferential support. The dream is "that all applicants to graduate school are fully qualified, submit all required data promptly, always correctly filled out, and well before the deadline; that all admitted students attend regularly on a full-time basis and follow their degree program; and that they are advanced to candidacy, apply for graduation, fulfill all requirements, and submit a publishable thesis or dissertation." If this should be your dream, the remarks to follow may seem to constitute an elaboration upon a nightmare.

It does not violate any secrets to assert that the essence of graduate study is quality – in faculty teaching and research and in student performance. A quick review of the proceedings of the meeting of the Council of Graduate Schools or the Midwest Conference, or the reports of Cartter and Roose demonstrates this point very effectively. The devotion of numerous sessions, even entire meetings to admission standards, evaluation procedures, the ramifications of graduate deans roles, the impact of foreign students, and the loss of dollars to support programs and students, are presented as qualitative concerns. It is interesting to speculate on the possible number of positive correlations and the level of confidence that might be obtained among administrative procedures as reflected in the hypothetical dream, the academic concerns with quality just mentioned, and the capabilities of students graduated. Of what significance are intelligence, motivation, social and cultural background, being a parent, and having a wife who can type in student success in obtaining a graduate degree. We do not have adequate data on any of them. Similarly, empirical evidence as to the direct contribution to faculty competence because of publication, professional association involvement, and maintenance of frequent office hours is equally absent. This is not to suggest that these factors are unimportant but only that their value is assumed, not empirically substantiated. Pursuing this type of nebulous speculation with regard to part-time and noncontinuous students, the question of whether their quality and performance is inferior to that of full-time people is also unresolved.

Beyond administrative convenience, the major advantage of having full-time students probably lies in the opportunity for continuous academic monitoring of their performance and progress. On the other hand, if this is truly necessary, it could be posited that it indicates immaturity, or a lack of independence or maybe an inability to assume responsibility. There are actually only two critical factors in graduate programs: the capability of the faculty to provide what and the capability of the students to master. To answer the question of superiority of any type of structure or student at the graduate level, superior capabilities of both must be established as existing predominately in either or both the structure and the students. In the remainder of this paper, it is proposed that the full-time/part-time distinction may be academically spurious and that if and when students other than full-time dominate graduate education, this will not in itself be detrimental to standards of high quality.

The Part-Time Student Structure

To illustrate some characteristics of a school whose graduate program is tailored to serve a large part-time student population, I would like to refer briefly to the University of Akron. During the present fall quarter, there are approximately 1,900 students enrolled for graduate credit but there are over 6,000 names in the active files. This file encompasses those who have enrolled at least once in the last two-year period. All but the smallest departments start two and three quarter sequence courses in any quarter of the year or perhaps several times during the year. The vast majority of all graduate courses, master's and doctor's, are offered in the evening hours to serve the greatest number of students. Most students have full-time employment, therefore, frequency of attendance and number of credits taken must be coordinated with occupational demands, personal obligations, and pattern of department offerings. It is inconvenient to come to the university other than at class time or just before or after. It is also important to realize that these students tend to be older, have had a variety of backgrounds, have many demanding commitments in addition to graduate education, and are intolerant of inferior education. They are paying their own way and expect a return for their money from their academic work as well as from some future benefits.

In 1970-71, doctorates were awarded to 33 persons, of whom three received their baccalaureate and seven their master's from the University of Akron. Historically, there has been a strong emphasis on undergraduate teaching service, so that the development of research is somewhat erratic, even in the doctoral departments. There is also heavy emphasis on community involvement by faculty, including in-service training for teachers, industrial researchers, and people employed in business and government. Contacts through these activities, plus excellent town-grown relationships, are a source for a number of students in the graduate school. In essence, the unending task is to maintain continuity in an academic setting in spite of factors that have traditionally been variable. One advantage lies in the fact that the University of Akron is over 100 years old and has had a long tradition of emphasizing undergraduate quality for its relatively high proportions of working and commuting students. It accepts its urban nature and is very comfortable with it. Although the first earned master's degree was awarded in 1882, the real growth at the graduate level is recent, but there is a high transference to it from the aforementioned accommodations to quality education.

Administrative Planning and Quality Control

In the context of an urban university, all administrative procedures must accept the noncontinuous and part-time student as a normal part of the environment. This means all aspects of the program must be developed and maintained with an awareness of student needs and thus avoid penalizing him for the fact he is not full-time. The major need for a sound structure is a comprehensive system of communication. This is always desirable but for noncontinuous students it is mandatory. When students are out for a quarter or more and around the campus only at class time in the evening, it is easy to miss notices and announcements of exam schedules and changes in requirements. In addition to advisors and departments, the Graduate School and the registrar must assume greater responsibilities in the dissemination of pertinent information. At Akron, there is an advance registration each spring for the next 12 months. This is computerized and the student gets a copy of the program he signed up for before the beginning of each quarter. He may indicate subsequent changes and also whether he wishes to be reassigned to another section by the computer if his original choice is closed. This system provides useful data on probable enrollment in particular courses and the number of sections that will be needed. This year we are adopting the use of a computer-produced transcript at the end of each grading period instead of grade reports. This should help the irregular students, faculty, and administrative officers maintain a continuous picture of performance and result in better advising.

Second only to efficient communication in importance is discretionary power for the graduate dean in waiving or mitigating various requirements and procedures in individual cases. This is particularly applicable in regard to time limits for completion of degree requirements, and to some extent, for admissions. In the latter case, the uncertain applicability of transcripts and test scores several years old necessitates an evaluation of nonacademic activities and successes as well as letters of recommendation in assessing admissibility. The most common deviations involve conditional admission or the requirement of a specified amount of work at the postbaccalaureate level instead of categorical denial, although we do deny approximately 25% of all applicants. Requests for time-limit extensions arise from job demands which preclude devotion to academic requirements for a period. These are outside the usual factors of ill health, research delays, draft, and change of advisors. The man who is proceeding on schedule and suddenly sent to Africa or the Philippines for two years requires special consideration when thesis deadlines and required courses offered once a year cannot be met. We allow 5 years for a master's and 10 years for a doctorate, with extensions of up to 1 additional year by approval of the dean.

More serious problems arise with regard to the residence requirement of three consecutive quarters of uninterrupted, full-time study. There is the obvious decision faced by a $25,000 a year man to take a year's leave of absence with an appointment worth $5,000 or less. Institutions must examine the function of the requirement when the student is one who has already committed himself to the discipline, has regular employment in some facet of it, and works directly on pertinent research investigation every day. He may have access to better facilities on the job for pursuing his doctoral research than the university can provide. I have never made an exception to this requirement but there is a growing uncertainty that there may not be justifiable circumstances for waiving it without compromising the quality of the Ph.D.

The characteristics of a school serving large numbers of part-time and noncontinuous students do not justify, in any way, the assumption that the quality of the graduate degrees must be lowered. There are several factors that function as quality controls, starting with the faculty who come primarily from schools geared to full-time students and their standards. It is true that academic deans, department heads, and graduate faculty must be fully committed to the fact that there can be selective quality education. This includes acceptance of the competency of students who attend evenings and noncontinuously, as well as willingness to adhere to the prescribed standards. Such an attitudinal climate may require periodic reinforcement by the Graduate Council and dean through reference to proven excellence in performance on campus, in further study, and on the job, especially for a new faculty as they adjust to the situation. A second strength has already been referred to, namely, the varied educational and occupational backgrounds of the student body, plus their utilitarian expectations from graduate degrees. This often creates a higher demand level than that of the inexperienced new baccalaureate holder.

Graduate Education in the 1970's

Barring drastic and unforeseen events, the course of graduate education in the decade of the '70's seems well charted. The evidence is heavily weighted in favor of priorities being increasingly assigned to other facets of the educational spectrum. Among federal and state legislators, industrialists and business men, and the general public, there is a noticeable decline in enthusiasm for graduate education. The reduction in dollars for students and research is compounded by the difficulties in placing graduates. More and more undergraduates are questioning the value of pursuing a graduate degree under present conditions. Graduate schools are curtailing enrollments, faculty additions, and expenditures, and reevaluating some existing programs. The overall impact of these negative factors has been felt differentially among graduate schools but if they persist for several years – as well they may – most schools will be forced to retrench.

It seems probable that those schools serving predominantly part-time and noncontinuous students will experience fewer effects from the prevailing climate of antigraduate education. The greatest growth in higher education has occurred in public, urban universities that are best able to accommodate transitory students. The large population base supplies a substantial enrollment nucleus albeit different persons from term to term. The heterogeneity of students plus individual attendance fluctuations permits full and varied course offerings with a small number of full-time students. Thus, a graduate faculty can be maintained for a complete curriculum because the enrollment provides a sound financial base. This financial stability is further protected by the fact that there is less need for either internal or external funds for student support. While this is especially applicable to students in the professional colleges, it does apply to the arts and sciences because a number of the employed people have planned for their year of residency and do not want to be restricted in course load due to service-connected awards. Some industries will give employees at least one year's leave of absence at partial pay to complete their doctorate, and many companies will pay all tuition for graduate work for employees.

The link between industry and the urban university which serves their research and management personnel also encompasses sponsored fellowships, consulting and summer employment for faculty, and grants, often unrestricted to departments. This is in addition to research contracts for scientific investigations which fall outside their research and development programs for one reason or another. There are also many opportunities to acquire research equipment as gifts because of common interests in certain problems. It is, of course, necessary to avoid becoming an applied research arm of any company, and this position must be established immediately in such relationships.

The final factor to be noted is in the area of employment. Many employed persons pursuing graduate degrees plan to stay with their employers after graduation so concerns about their job placement are eliminated. Many others, who hope to move, nevertheless have a job to support them while they look around. Again this situation is most applicable to those in professional schools although not restricted to them. Another important point arises in the college recruitment activities by business, industry, government, and educational institutions. This is concurrently a recruitment for a convenient graduate school if it will accept part-time students and provide a well-rounded evening program. It should also be noted that we do not admit those who fail to meet the admission standards, and while the applicant may claim his company expects him to attend, no pressure has ever been exerted in behalf of any employee. In fact, we have rejected persons awarded company fellowships without any complaints. As the research director of a large corporation told me, "You must not take everyone who applies because you cannot afford to graduate anyone who cannot do what his degree says he can." In other words, adherence to qualitative standards by the Graduate School is in the best interests of the company.

Concluding Remarks

The conclusion to be drawn at this point is, I think, that schools serving part-time and noncontinuous students can, in spite of certain practical accommodations, provide graduate education commensurate with the criteria currently in existence. These standards still retain portions of their European and American private school heritage. They have been modified to some extent by the large public university that serves a rather different student population and responds to a different master. The urban university with its large complement of part-time students has attempted to conform to this model, but what of the future. It should be understood that an urban university is not merely located in a populous area but is highly responsive to it and, in a sense, is a reflection of it. If conditions detrimental to the traditional pattern should disappear rapidly, I would anticipate graduate education will continue to evolve rather slowly. If, as seems quite possible, even probable, they persist through the remainder of the 1970's and beyond, and there is a continuation of the overall downgrading of graduate education, the schools experienced in part-time students may emerge as pacesetters. I view with alarm such developments as open enrollment, universities without walls, the increase in pass-fail options, and the elimination of low grades. But I do not deny their existence nor probable expansion, and when the products of these aberrations from traditional educational systems seek entrance to graduate schools, they will have to be reckoned with. Schools like Akron, accustomed to coping with unique situations, will be better prepared than most in adapting to them. We now have computer people from all over the country coming to study our automated registration and record-keeping system which encompasses part-time and noncontinuous student enrollment. Restrictions or quotas for programs must be quite flexible because of the uncertainty as to who will be enrolled or meeting requirements in any particular quarter. The departments handle this for the most part and the Graduate School serves primarily as a watchdog for abuses. There are minimal problems about minorities because their employment opportunities are so closely related to attendance and vice versa that policy questions are essentially immaterial.

In a sense, it is paradoxical that the characteristics that at first exposure seem detrimental to the development of a graduate degree program may increasingly become advantageous. I know that no amount of explaining can truly condition a new faculty member who has come from a traditional graduate school experience to the part-time student body and the ways the program must function. Such cultural shock is only tempered by experience. But tempered it is, and gradually there comes the realization that the essential ingredients for quality education are present and working. A limited number of faculty cannot make the adjustment and leave, but it is exciting to see the commitment grow in the majority of the newcomers as they realize they are still in the midst of many excellent students and competent, professional faculty. There is a TV commercial showing a customer in a restaurant telling how the waiter kept urging him to try the specialty of the house. "Try it, you'll like it." "Try it, you'll like it." The customer then adds "I tried it. I thought I'd die." If, for whatever reasons, it becomes desirable or necessary to inaugurate or expand a program for part-time and noncontinuous students in your graduate school, I can only say, "Try it, you'll like it," and assure you it won't be fatal.

Discussion

Dr. Rand, Texas Southern University, Houston: I think I understood you to explain your residence requirements for the doctorate. What about the master's degree person?

Dr. Lively: We have a five-year requirement for a master's program with a maximum extension of one year. If they do not comply within that six-year period, the maximum, then they must give reasons why an extension is permissible. What we then do is make them add courses at the end as we eliminate courses that have become obsolete. In other words, they must meet the minimum requirements for the degree within five years, counting back from the date of graduation.

Rand: I am interested in knowing how much time you require him to put in on your campus – residence since I operate one of these programs also and have had some problems with some accrediting agencies about the clarity of the residence requirements.

Lively: We have no residence requirement at the master's level.

Rand: I wanted to ask where does this argument come from?

Lively: I have no idea, sir.

Rand: We do not have any extension work.

Lively: We do not, either.

Rand: Everyone comes to our campus that gets any credit, but we keep getting feedback about your residence requirement.

Voice: I want to say that these two papers, Dean Foster's and Dr. Lively's, make more sense than I have heard from this organization for several years because they have correctly described and identified the problems, and certainly point the way toward the fastest-growing segment of graduate education.

We have the problem that was mentioned here that certain staff members trained in the traditional manner are contemptuous of this type of education. Unfortunately, they are not too mobile, so they remain with us, frequently downgrading our effort. I prefer to work with this type of student environment because you have a high motivation, you have a variety of experience among the student body.

The two papers here, I made a little note, opened up about 10 topics for discussion on which we can build an entire program. One thing that Dr. Lively indicated that I know is valid and significant is there is no better way by which the university can be identified with the industrial and business community than through this type of graduate education.

Lively: I might add that it is absolutely crucial that as faculty are recruited that they be fully informed of the nature of this institution and that their teaching requirements will include day and evening programs. If they are not willing to accept that, they should not come.

Dr. Giordano, the Polytechnic Institute of Brooklyn: I gathered an impression that some people seem to feel that there is not much information associate with part-time education. I think perhaps if you refer to the *Journal of Engineering Education*, you will see many articles associated with this type of education, and this is extremely revealing, I am sure.

Now the question that was asked before in terms of the time required on campus. At Akron apparently they must complete their program on campus, but you do have students coming with transfer credits and I presume that they are granted transfer credits. So that if you are speaking in terms of a lot of time spent on campus, you do not think in terms of time; you think in terms of credits. In other words, he has to complete a certain number of credits on campus.

Lively: Yes, we require that two-thirds of the master's program be completed in our university and at least 50% of the doctoral requirements.

Dr. Leone: Bowling Green: I have a kind of mechanical question. In a normal traditional kind of a graduate school, most students are assigned to some particular degree program, usually managed by a department or some committee. Now our experience has been that as the number of part-time students increases, the number of nondegree students increases, and I can see this becoming a problem of almost unmanageable proportions, and I would be curious about how a full-fledged operation manages this.

Lively: Every student who is admitted to our graduate school is admitted to a specific program in a specific department. If he desires to change that in any way, he must reapply to the Graduate School and be reevaluated by the department in which he wishes to transfer.

This does create some additional work in my office but I have found it the best way to maintain a control to keep students from wandering here and there. As a matter of fact if someone, say my assistant, finds a student whose registration shows a consistent pattern outside of this program, he will get a letter asking for an explanation and asking him to reapply and be reevaluated.

I might add, if you want to see an angry student, see one who has been admitted to one program and then is turned down when he reapplies to another.

Dr. Michel, University of Rhode Island: Dr. Lively, you indicated that in your experience you have not had much difficulty in not accepting employees of some of the business firms who provide tuition or even fellowships for their employees wishing to undertake part-time study. Have you ever run into the problem of part-time faculty who are employees of these concerns, and does the situation ever arise where a supervisor, in the industrial sense, of one of your students becomes a committee member or even a major professor for a student in one of your graduate programs?

Lively: We do not let nonfaculty members serve on committees and generally speaking, we do not have that kind of situation. I suppose as we get larger it could well happen.

I have an advisory committee to the Graduate School of 15 lay people. About seven of them are research, the vice presidents for research or the research directors of Goodyear, Goodrich, Firestone, PPG, and Babcock and Wilcox, and companies such as that in our area. I meet with them periodically and I discuss these problems and they continuously reaffirm that we have to administer the program.

Goodyear International provides us with three or four international fellowships each year, and last year at least one of the students they recommended we rejected on academic grounds. They simply submitted another nomination.

We have not really experienced the specific situation you mention, and I guess we would have to cope with it if and when it arises.

But the University of Akron was a municipal university for 50 years until it went state in 1967, so we have worked with these companies. Many of the presidents, chairmen of the board, vice presidents, directors of research, are our graduates and I think are familiar with us, so we may have an advantage there that some schools would not have, where they have graduates from many different programs. So I really cannot answer your question as to what we have done and I am not sure I know at the moment what we would do. We would try to control it.

You did touch upon one problem of our own faculty working for graduate degrees. Here they are not permitted to do that within their own college.

Dr. Cheston, Georgetown University: Dean Lively, how large an administrative staff do you have? I bring this question up as the majority of our problems are with our part-time students, and if I were to calculate the amount of administrative hours going into solving, asking for leaves and extensions for part-time students over these type of problems with full-time students, I think it would be close to probably 75 or 80% of our time goes into this sort of activity. And if we are to gear up for more part-time students, we have to calculate this type of cost factor in our administration.

Lively: I work with one assistant and three secretaries.

Again I guess I must stress that the faculty and the department heads and the deans are the key to this kind of an operation. They must understand it. Many of these kinds of problems can be avoided if these people do their job.

Now I have said that if every dean, department head, and graduate faculty member did everything right, you would not even need a graduate dean. I do not anticipate that happening, but I do find that in most departments in most colleges, they anticipate the problems with the students and try to resolve it, either get the student through or to make these kinds of requests ahead of time.

There is a steady flow but it is never inundating at any time and I am talking about, as I say, roughly just under 2,000 students a quarter.

Dr. Foster: I just think that we should be aware that the part-time student is an expensive student and it seems to me perfectly legitimate to pass some of that administrative cost on.

I have made a great point that a third of a person is a person, which means that a person who is paying a third of the normal tuition actually is also taking up a full amount of administrative time and money, college money, so it seems to me perfectly legitimate to pass part of that cost on.

It is cheaper to have full-time students. You can get fellowships for them; you can support them in other ways. Part-time people are expensive people and I think that we might well scale our tuition with this in mind.

Voice: University of Arkansas: Why are you so adamant against nondegree students? Are you not getting a lot of pressure here? Why the block on nondegree students?

Lively: I do not understand you.

Voice: You do not have nondegree students?

Lively: Yes, we do.

Lively: What I meant – maybe I was not clear – is a nondegree student must identify a department so that he can be assigned and counseled for whatever courses he may want to take. In other words, we do not turn him loose in the Graduate School; we keep track of him as identified with a department.

This means that in the computer system he is given a college and a departmental code so that all of his records are shooting to the same place continuously and again, if he wants to shift, he must go through a process again.

We even have dentists and doctors. I had a conference with a dentist the other day who was admitted as a nondegree student in psychology with the proviso that he could not take any technique courses. Apparently the department was afraid that he might hang out a shingle and practice psychology.

He has now completed roughly 68 hours at the graduate level and he wanted to sign up for a couple of courses and the department head said, "These are technique courses," and he contended they were not. He came in to see me and I told him I would wirte a letter to the department head indicating that I had no objection to this man taking additional hours, that the man had said to me he was not going to practice psychology, and that he was nearing the end of the courses he wanted to take.

If the department stands on its professional expertise and says they are technique courses, I told the man "I will not pursue the matter further, but I will request consideration for you."

So most of our nondegree people, however, are in education. They have a master's degree. They need two, three, four courses for some kind of certification. They are in and out. We have a very limited number of those.

Dr. Reynolds. University of Northern Colorado: I have two housekeeping questions, I believe, the first one to both Dean Foster and Dean Lively.

Do you have a maximum number of hours that you permit a part-time student to take, particularly one who is employed in education or in any other type of field?

And then, Ed Lively, if you would explain a little more. If I followed correctly you said that each spring you register for the full-year ahead. I think it would be interesting to all of us to know how you work that technique.

Foster: I am afraid I do not quite understand about the maximum number of hours. We talk about minimums at Bryn Mawr. Is this useful?

Reynolds: Do you run into trouble of students wanting to take more hours as graduate students than they really have time to do? If they are devoting all their time to study, they really do not have enough time to do their regular job.

Foster: Oh, oh, yes. I see now the point of your question.

Yes, I think we have a great deal of difficulty explaining to people that graduate work is a major undertaking and that you cannot bring up 17 children and run a full graduate program and teach in the local high school at the same time. This I would regard as one of the expensive administrative aspects of dealing with part-time students.

Lively: We have no limit, no maximum limit. Here again I have created some headaches for myself. When a student obtains a master's degree, I again insist that he reapply. At that point, unless he seeks entry into a doctoral program – we have 12 at the moment, he could be admitted to the same department for further study as a nondegree student, we have no limit on how many hours he might take, but again we have some kind of an administrative handle on him.

The advanced program registration has been in effect for, I guess this is about the fourth year of its operation, maybe the fifth; I am not sure. It cost one computer center director his job. I think every division head has turned over at least once.

At the moment I am extremely pleased with the people we now have. They seem to know what they are doing and I can get answers and questions resolved very quickly.

All students who are in school during the spring quarter are given the opportunity to indicate through their advisor the courses they want to take in the summer, either or both summer sessions if they plan to attend, and during the following fall, winter, and spring quarters. This is all fed into the machine and we have, obviously, printouts of anticipated enrollment in the various courses. And as I said, this permits a great deal of prediction. With the part-time enrollment, as you know, it fluctuates tremendously. This does give us a lot of guidelines as to how many sections of courses are needed. I suspect it is more useful at the undergraduate level than at the graduate level but nevertheless we find it very helpful.

Then the machine prints out before each quarter – I think it must be about a month before the quarter – what that student has signed up for for the upcoming quarter. He is mailed a copy of it and he can then indicate if he accepts what he has signed up for previously, and he initials it and returns it. If he wants to change it he indicates the changes he wishes to make and whether he wants to be registered totally by computer or partially manually or on a total manual basis.

And as far as the actual programming of it, I frankly do not know. I simply know that it works.

Dr. Crawford, from Minnesota: You have about 2,000 students a quarter. I was just wondering, do you have any recollection of figures as to how many students for a given winter quarter will make changes from their preregistration program?

Lively: In the last year – and I'm not sure I have an answer, Dean mmmmm Crawford – the number who have made changes has diminished tremendously. It used to run close to 50% but it seems to me I heard very recently that for this current year – and as I said, this is about the fifth year of its operation – the students now are familiar with it. It is down to around just under 30%. It will not drop beyond a certain point, obviously.

But this was quite a headache. I think it is gradually being cleared up, and part of it is simply familiarity of the students with it.

Dr. Kubzansky, Boston University: I there a corrosive effect on the quality of instruction when the majority of people sitting in the classrooms have a relatively full-time commitment to an employment situation in influencing the character and the nature of the faculty's demand for the students' performance either in the course or in dissertation work or what-have-you?

Lively: I have not found that. Obviously, there is a fatigue factor. The person who has worked in an office or a laboratory or what-have-you all day and rushes up to campus for a five o'clock class is tired. The faculty member who might have been in his office most of the day may also be tired. But I have found a kind of revitalization occurs through the greater motivation of these people. They are only taking one course, for the most part; occasionally two, and they come maybe two nights a week, they are taking a course that is moving them slowly toward their goal, and they are very anxious to fulfill the requirements.

Perhaps the biggest single problem is access to the library, and our library is open seven days a week and we are exploring the possibility of 24 hours a day, seven days a week.

Now the problem is mostly staffing but this is our goal. This is what we hope to do.

We are in the process of building what we call a learning resources center that will be fully automated in a dial access system, and we think this will solve some of the problems for these people as well.

Dr. Kubzansky: My concern was almost more on the impact of this population of students on faculty expectations and on the kinds of demands that faculty make in their in the level of performance. And the question is, are the people who come through such programs and the caliber of the work they leave done in these programs in some degree monitored with respect to this kind of concern?

Lively: It is monitored, I would say, since we have a number of departments that offer only master's programs and students from these programs go into doctoral programs at other schools and do quite well, which is one kind of control. If our students begin to fail then we have to take a look at it.

It seems to me that perhaps this is where the graduate deans function. I believe Dean Spurr in an article one time referred to the graduate dean as the conscience of the graduate school. This is where I do a lot of prodding to keep them on their toes. I do not know how many of you do, but all of the theses and dissertations that come in, several hundred, I look at.

I would not say I read them. I do not understand a lot of them, but I look at them. Generally I look at the introductory chapter and the conclusions, and occasionally will call a dean or an advisor and ask him, "What's going on?" I say, "I don't understand how this can be a thesis." I have even rejected a couple.

As I said before and I will reiterate again, this kind of operation is very heavily geared to the integrity of the faculty and that is not easy.

As I indicated, I went back through our commencement bulletins for this past year to see where our students came from. I mentioned three had gotten their baccalaureates from Akron, three from Penn State, three from Purdue, three from Bowling Green, and one from Cornell, one from MIT, others from several other places.

A great many of these people will not tolerate an instructor who does not give them what they want and in most cases, what they want is good, solid, advanced education. They will write letters to the president and sometimes to me but frequently directly to the president.

It is always a problem. I do not want to say this must not be continually monitored, but I think at the present I am comfortable with it. I suppose every graduate dean wishes it were better but I am comfortable with it.

Dr. Gordon, Notre Dame: I had assumed that most of your graduate students are in job-related curriculum and by this situation you then attain the saturation or marination. How do you achieve the same marination. I am in science. However, my liberal arts colleagues dwell at length on this saturation, this marination that comes from continual exposure which the full-time student would have to a field of endeavor as opposed to the part-time student. How then do you maintain that when the part-time student is in a degree program totally unrealted to his job?

Foster: I am sure that Akron's experience is much more significant for all of you, but I think presently we are making a false distinction sometimes in separating the part-time student off quite so clearly because in our experience they move back and forth from one category to the other rather freely and very rarely does anybody except the dean's office know whether this person is part-time or full-time and this to me is the ultimate answer to the question that was raised.

If you cannot tell the difference except by looking at the registration slips, then I think all of the rest falls in line.

Now I do not think this is necessarily true at Akron or at Boston, but it is quite possible if you are handling part-time students within the regular framework for it to be true, then I think this is one way of looking at part-time graduate education.

Dr. Lively: I think this is true that the faculty really, as they become acclimated, begin to forget entirely about this. In other words, these are simply the students in their class seeking the kind of knowledge and wisdom that can be dispersed and dispensed in that particular course. And other than the advisers and those, perhaps, who have maybe served on an assistantship in a master's program or something, they really do not pay a great deal of attention to this. In other words, the focus is on the performance within the particular course.

Voice: May I ask what your mix of part-time and full-time students is? I suspect it may be largely different with Dean Foster's group. It might be appropriate there for [illegible] to answer.

I am thinking of the fact that you cannot obviously teach all of the required courses in the usual program at five or six o'clock in the evening. Do you in fact find resentment among the full-time students, particularly the teaching assistant who might be teaching a class at eight o'clock in the morning, and yet be required to be alert in class at ten o'clock at night, because that is the course he has to take? Is there any reservoir of resentment?

Lively: They attend our university with full knowledge that this is the structure of the program. With the exception of education, I believe almost all of our graduate courses are offered in the evening for full- and part-time students.

We run approximately 75% part-time. If I recall the figures for the fall quarter, we had about 1,921 or 1,981 head count and about 800 FTE's. Really about the only full-time students we have, and of course they are carrying a reduced load, are the students who are receiving some kind of assistantship or fellowship support, and this runs about 400 students.

Beyond that, we have a retired Army Colonel who is going full-time. We have a housewife. We have a student from a family who can cut it some way, or some people who have been out of school three or four years, saved their money, and want to get through very rapidly. Practically everyone else is carrying less than eight hours.

Foster: I do not think we are as obliging as Akron. We do not give our courses in the evening, and people who want to come part-time to our graduate school come in the regular hours. Most seminars happen to be given in the afternoon. And you have also to remember that some of our part-time people are women and it is not the most convenient time in the world to go in the early morning or in the late evening, so that we run a regular academic day and expect the part-time student to fit into the hours that are provided, so that nobody resents anybody as far as I know.

Third Plenary Session: Developing a National Philosophy for Graduate Education

Thursday, December 2, 1971, 8:30 p.m.

Presiding: Michael J. Pelczar, *University of Maryland*
Robert F. Kruh, *Kansas State University*
Donald W. Taylor, *Yale University*
Joseph L. McCarthy, *University of Washington*

Introductory Comments

Michael J. Pelczar

The Committee on Policies, Plans, and Resolutions of the Council of Graduate Schools has been encouraged by the membership, and also by the Executive Committee, to explore ways and means by which the Council of Graduate Schools in the United States can achieve a more effective role as the leading force for guiding graduate education in this country. We have received suggestions telling us that CGS should be acting rather than reacting; that CGS should be the spokesman for graduate education, or, as Gustave Arlt stated in his remarks to the membership of this group at the Tenth Anniversary luncheon in Miami last December,

> Look beyond the vexing problems of today and tomorrow to those of 1972 and 1975. Remain constantly alert to the development of the impending changes. Be prepared to lead rather than to follow.

President Page, in his report at the business meeting, echoed a similar attitude when he said,

> If the graduate enterprise is to be redesigned, then we the experts should have a hand in the designing of it. But we will be granted this role only if we submit the best design. And it is clear that the self-appointed architects of the new grand plan are already busy at work.

Indeed, leadership was the concept of the role and purpose of the council when it was established. Bernard Berelson, in his address at the first annual meeting of CGS, held in 1961 in Washington, D.C., concluded his talk with these remarks:

Joseph L. McCarthy was unable to attend the CGS meeting; his presentation was given by Michael J. Pelczar.

> You have created here the organizational opportunity to provide further leadership in this great enterprise. I hope you will realize on that opportunity; that you will feel not apologetic but strongly confident about graduate study in this country; that you will lead from the strength that is yours, for this is a tremendously important undertaking. It is not too much to say, I think, that the people in this room are in charge of the most important segment of the most important institution in the most important country in the world.

In today's steady flow of reports from commissions, symposia, workshops, etc., on the health of higher education, graduate education, as we all know so well, has not been slighted. Indeed, the current notoriety of graduate education comes more from a questioning of our practices rather than from an acknowledgement of our successes.

Last month at the meeting of the National Association of State Universities and Land Grant Colleges Dr. Henry stated the following concerning critics of higher education:

> The university under fire is a favorite topic for journalists, educators, study commissions, politicians (student and professional), and many others. Each has his own bill of complaints, some real, some imagined out of ignorance, some self-serving. Each has his own remedy; some merit attention, some unbelievably simplistic, some completely unrealistic, some destructive of universities' basic purposes and potential.
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> We are now engaged in a crucial confrontation and public debate. Broad skepticism voiced by some public leaders is seldom substantiated by fact. And colleges and universities are being victimized by rumor and innuendo without adequate inquiry and by false generalizations.

Dean Harrison Shull, speaking at a recent meeting of the Association of Graduate Schools on a theme that was entitled, "A Crisis in Confidence," remarked:

> I wonder out loud why those of us in this room, and others representing our universities, thunder so softly at the present gross distortions of successful national programs in graduate education.

It should not be surprising, then, that there has developed a sense of confusion, disenchantment, and, indeed, in some instances, alienation on the part of legislators and the public toward higher education. Hence the development of a national philosophy supportive of a healthy respect for graduate education must recognize this current dilemma.

It is of paramount importance that we strive vigorously and to the best of our ability to convey to the public the record of our performance. Our critics have us on the defensive. As they say in football parlance, the best defense is a good offense. And we have not resorted to our collective wisdom to develop a good offense.

Even the Newman Report, which is so very critical of higher education, stated:

> The brightest stars of American higher education have been the graduate schools. Their growth, advance in scholarship, and research contributions have been the envy of

> the world. Since 1948 the number of doctorates granted has increased six times; the amount of research funding has increased by a significant dimension, etc. During this period, world leadership in the graduate education and in basic research has passed from Europe to the United States.

Dr. Howard Bowen, in the spring issue of *Graduate Journal*, stated:

> If any one branch of higher education can be termed a brilliant success, it is graduate study. The products of graduate study have been the mainsprings of our technological and economic achievements and the guardians and builders of our culture. They are found in every strategic decision-making center in our society; they have harnessed nuclear energy, put men on the moon, regulated the economy, influenced our foreign policy, manned the universities and the upper reaches of the Civil Service, and through their discoveries created great industries, formulated our philosophies and ideologies, and influenced the arts through their critical and creative faculties.

Further evidence of the attractiveness of American higher education, and particularly graduate education, is revealed from the figures provided by the 1971 Report of the Institute of International Education. This report states that over 144,000 foreign students enrolled in institutions of higher learning in the United States in 1970-71. Approximately half of these were graduate students. Ten years ago this number was only one-half that large. Further, in 1970 there were approximately 12,000 foreign scholars at institutions of higher learning in this country in contrast to 6,000 United States faculty members and scholars abroad in the same year. The facts are, as you know, highly supportive of the successful accomplishments of graduate education. In these times it is indeed an obligation to carry this message to the public.

We need to enumerate our accomplishments more clearly, with pride, and more repetitiously. We need to talk about the changes that we have already made and those that are in the making. We need to make it known that we recognize the need for change, but, at the same time, we must make it abundantly clear that much of what we are doing needs only little modification.

A profound change has occurred in American society, a change more fundamental than the change from an agricultural to an industrial society. In our era more education is available to increasing numbers of people at all levels. This is all to the good. We are moving from a production economy to an educational economy. Or, stated another way, a lifelong education is indeed a truism.

There are numerous statements reflecting the types of changes that are being contemplated. We have heard them talked about at our previous meetings; we have heard some discussion of the subject today; and we will hear more during the deliberations that will take place during this eleventh meeting of the council.

Certainly this council is knowledgeable and receptive to the concept of change and innovation in graduate education. But, again, we need to speak in a convincing manner of our intentions. We have already developed and introduced innovations more extensively than we have been given credit for. We need to identify our accomplishments as well as to reveal plans under way for program changes.

There are, of course, other major issues that need our collective attention in any attempt to develop a national philosophy in support of graduate education. I would like to enumerate a few that, I think, would be at the top of the list of matters that give us concern.

First is the matter of the availability of graduate education to an increasingly larger number of the population at a time when headlines claim a surplus of graduates. Second, the problem of financial support, or more accurately lack of support, will be commented on by Dean Taylor. This certainly is one of our major concerns. Third, there is the growing need for continuing, nondegree graduate level education in addition to postbaccalaureate and postdoctoral education. Fourth is the matter of program innovation, particularly the research-oriented degree versus the practitioner type degree. Fifth is the issue of reassessment of the service aspect of graduate research education.

I have deliberately resorted to a rather extensive use of excerpts from recent reports. I suppose your files and book shelves are like mine, bulging with essays, some scholarly, some not so scholarly, on what is wrong with graduate education and how it should be changed. I get the feeling, if I might paraphrase a French philosopher, that all that needs to be told is written; but since nobody is reading it, it needs to be written again. And I might add that a lot of what needs to be told is lost in what should never have been written, or as a young girl in one of my laboratories remarked after listening to a long set of directions on how to perform an experiment, "Let's stop talking about it and do it."

Economics and Political Aspects of Graduate Education

Robert F. Kruh

Our subject deals with the philosophy of graduate education for the future, and political and economic questions figure very heavily in the formulation of that philosophy. The questions that I would like to raise are formidable ones dealing with our ability to continue to offer advanced education of high quality which the nation needs. I do not have any final answers, or probably any answers at all.

All I have to say has been said before, although it will not be held to be free from certain heresies. This is particularly true with regard to suggestions for needed planning and limitation. Whenever any sort of control is suggested, even in the pursuit of quality, it is almost certain to flush out the wounded cry that academic freedom is under attack and is likely to be threatened if not totally destroyed. Therefore, let me reject in advance any confusion or accusation to the effect that I am not in favor of more and better education for more people, or that I would abridge the scholar's pursuit of truth.

In the years since World War II, we have seen unparalleled rates of growth in institutions of higher education and number of advanced degrees awarded. This growth has had several characteristics.

First, a great deal of autonomy allowed institutions to follow their own perceptions and aspirations; thus, the programs developed in one institution took little note of those cultivated in others and many were apparently guided by the same set of facts.

Second, in the expanding national and educational economy, the pressure to make hard choices was not particularly great. A new program could be comfortably accommodated by addition rather than by substitution, and, for example, it was not necessary to slash or eliminate geochemistry in order to release funds for ecological studies.

Third, growth in those years tended to follow a common, almost monolithic pattern; Or, as Bill Bevan said recently, there has been a rush toward homogeneity like lemmings rushing toward the sea. Many of the new doctoral granting departments and even whole institutions have aspired to the Ivy League and Big Ten model, with faculty members designing new programs in a stereotypical research style. Publish or perish became the order of the day at many of the newer universities, and the most acceptable career objective was the research post with a small teaching load, which thus tended to reincarnate the major professor. Even now, with growing numbers of Ph.D.s available to fill the variety of jobs, the prospect of offering a new Ph.D. program seems to have as much allure as ever for the aspiring department.

The result of these development is well known. We now have such a large capacity for offering a doctorate in most fields that the President's Task Force on Education in 1970 noted the sufficiency of institutions to meet this demand. The Carnegie Commission, even more recently, insisted in its projections for the year 2000 A.D. that there is "no need for any more research in universities granting the Ph.D." and further that "available resources should be concentrated on existing ones rather than on creating new ones." Even though granting that certain populous regions need additional institutions, the National Science Board takes the view that essentially no increase in the number of institutions is needed simply to provide for the numerical requirements of nationally increased graduate capacity.

With this preamble, I should like to turn to some primitive economic considerations. Although present financial circumstances accentuate the economic realities, these realities have always been with us. We have always had to face the fact that we do not have the resources to undertake all of the educational activities that may be needed or that are worthwhile. Because there are not unlimited resources, no matter what the cause of that limitation, for the support of graduate education, we can anticipate certain outcomes based on Garrett Hardin's metaphorical essay, "The Tragedy of the Commons."

The commons was the pasture used jointly by colonial families. Of limited extent, it could support only so much livestock in a healthy state. Little by little, however, new families added stock and old ones were tempted to increase their herds, so that the commons' capacity was taxed to the point that it no longer provided a flourishing existence for the large number of contenders. Even though the cause of the then marginal existence was clear, no one family could be cited as having caused the distress, and the tragedy of actual loss ensued because there was no willingness to take individual action for the collective good.

This rather simple analogy can be applied to parts of the academic enterprise, all the way from the activities of a single professor to the entire assemblage of the nation's institutions. In regard to graduate education it would seem appropriate to question the marginal effectiveness of certain existing programs and to challenge the heedless proliferation of new ones. One can do this and still recognize that a certain amount of redundancy in education is not only desirable but necessary. As Kenneth Boulding observed, the highly specialized institution, like the highly specialized organism, is less adaptable and is likely to become extinct.

The point has been reached, however, where independent action in creating new programs imperils many efforts. Any one activity may be perfectly worthy, but our ability to carry it out becomes more or less successful in relation to the resources available for all such activities. Today, or course, we are acutely aware of having to make many hard choices.

So far I have been speaking generally. In more specific terms, we need to look at ways in which existing or likely resources can be used to serve the nation's needs well. We and our faculty colleagues sometimes forget that universities, whether public or private, are agencies of society, supported by and responsible to society.

An important responsibility is to create and disperse new intellectual capital. But another is to define for society what that society, including its universities, might become. To do this credibly demands an internal discipline in the use of society's investment that has been largely lacking. As a result, a discipline, or ordering, is being imposed, which is particularly visible in the form of state regulatory and coordinating agencies. Choices are being made for us instead of by us.

I hope it is not too late to consider effective steps, on at least a regional basis, that will more closely adapt our efforts and activities to resources. We should be able to make the hard choices needed to maintain quality and to differentiate programs among institutions so that each would not aspire to eminence in all areas; for to do this would invite the tragedy of the commons and ultimate mediocrity.

Some things should be left unattempted at a given university so that others can prosper. Cooperating through consortia and sharing would afford a student access to specialties in one center if not in another. Understandings between institutions regarding a division of labor would ensure adequate availability of sophisticated and esoteric programs without undue proliferation and waste and would also recognize and discourage the overbuilding of educational capacity in customary fields that far outstrips foreseeable demands.

Even though there was much anguish and skepticism when Dr. Roose suggested to us last year that graduate programs be limited, he is not alone in these views. Ann Heiss, the President's Task Force on Education, and the National Science Board have all encouraged differentiation and a reduction in wasteful competition. "Anything goes" cannot be a principle for development; it never really has been. But faculties and institutions sometimes act like it is and bristle when restraints are suggested. For us to maintain a strong program in experimental psychology at Kansas State University while the University of Kansas emphasizes a clinical curriculum does not impair the intellectual freedom of the scholars at either institution.

I am suggesting cooperation among institutions, differentiation of effort, and a variation in the style of our universities. The trimming of substandard of unneeded programs and the coordination of others between neighboring institutions will release energies and funds for new enterprises and for added quality in old ones.

We continue to need strong research universities, but many other kinds of programs are needed as well. William Arrowsmith pleads for diversity in his essay "The Idea of a New University," which dwells on the university for public service.

It is not at all clear that a plan can be found to serve our educational needs as well as possible under the resources available. Perhaps it is admitting defeat to say we cannot even agree on what the needs are. And I realize that the idealism of the forgoing propositions may be too impractical, and the force of parochial politics to strong, to allow such ideas to receive serious consideration. For they do imply restraint of institutional freedom, or so it seems when one hears the undertaking of Ph.D. level work referred to as "the exercise of the right to mature academically."

With more acerbity than amusement Mayhew observed that "once an institution is struck by the graduate virus it will oppose efforts to contain its ambitions either by senior institutions or by coordinating bodies." Whether we like it or not, restraints do exist and new ones, not of our own choosing, are likely to come about. Better that they be mutually planned by good educational stewards, than inflicted by haphazard empire building, on the one hand, or ill-informed regulatory bodies, on the other.

Simply to point with alarm at the increasing control by state coordinating bodies, as did a major educational organization recently, is not enough; rather, we might well consider how the schools themselves, and more specifically the graduate schools, could devise guides and standards for selective development and differentiation of effort among institutions so that they might work within limits doing better what they may now be doing well. I will not attempt to specify the geographical or political scope for the application of those standards, but it frankly comes down to our taking the lead or letting someone else do so, possibly even on a national level. The Council or Graduate Schools has a special role to play. We have the talent. But even if we have the willingness, the problems extend well beyond our sphere. Nevertheless, we could very well determine patterns for prudence in the use of resources that would not only be academically sound but that would also give our schools much greater credibility in the eyes of a society wearying of the academy's demands and skeptical as to the prevalence of self-interest.

Perhaps the answer is to obtain more support for higher and graduate education. And, indeed, congress is currently considering such possibilities. But this is not so simple any more, and the age of response on faith is past. It is up to us to seek support, not in terms of what the universities need but in a framework of response to society's ambitions as we help society to perceive those ambitions. It is probably past time for us to take some affirmative action (to use the current wordage) in a collective sense. Finally—and this is a disclaimer—although I seem to be saying, along with Skinner, that we cannot afford freedom, I am not espousing a categorical separation between established and emerging universities, which would suppress the latter; rather, differentiation could well involve limits for both and a definition of functions to serve a great diversity of needs.

The Council of Graduate Schools has an opportunity, if not a responsibility, to set a sense of direction that will optimally meet the nation's requirements for graduate education. How this might be done, or even whether it can be done, remains to be seen. The issue is of immediate concern—and only the future of graduate education is at stake.

Resources for Graduate Education

Donald W. Taylor

I would like to begin my remarks with a quote from the article, "Hard Times for the Graduate Schools," by M. Crawford Young and Robert M. Bock, of the University of Wisconsin, which appeared in *Change* magazine.

> It is now plain that present national priorities may produce less and less support for graduate education. One federal program after another is being curtailed or terminated. The valuable infrastructure of advanced scientific training capability, assembled at great cost in the 1960's, now is being dismantled.
>
> In the graduate schools themselves apprehension and fear mount as the evidence of cumulative damage piles up. Although the cutback is nationwide, one way to view the erosion is through a single institution. The University of Wisconsin in recent years has awarded 3 to 4% of the national production of Ph.D.s. The graduate enrollment soared from 4,046 in 1960-61 to a peak of 9,063 in 1967-68.
>
> A general level of federal support through agencies such as NASA, the National Science Foundation, the National Institutes of Health, and the Office of Education

> developed a range of imaginative programs which helped pay for the doctoral degree for many students who could not count upon parental support beyond the completion of their first degree.

Dean Bock was speaking in terms of one institution, the University of Wisconsin, and he described quite vividly in two pages the consequences of some of the recent cutbacks and the impacts on that campus. He detailed some of the reasons for these cutbacks familiar to many of us. At one point, for example, he stated: "But even more grave than the demise of the predoctoral program is the serious possibility of elimination of all training grants." He went on to tell the number of stipends there and the consequences that might occur if the training grants were phased out.

Early in September I received a telephone call from Washington, from one of our colleagues who was quite concerned to learn that possible phasing out of the training grants, that is, the training grants in the biological and social sciences, was again under consideration. We talked at some length, and then we visited in New Haven. And prompted by that telephone call I undertook a somewhat similar analysis of our experience at Yale. As Dean Bock suggested, sometimes one can be more vivid in terms of what has happened on a single campus than to talk in terms of national numbers.

As a result of that call, I eventually wrote a five-page statement entitled, "The Impact of Federal Actions and Proposed Actions upon One Graduate School," and sent a copy of it to every member of the Yale faculty. And subsequently I sent it to the more than 14,000 alumni of the graduate school, hoping that this might have some effect on the contributions that we receive.

In the second and third paragraphs I wrote, in part:

> As a result of a series of federal actions and proposed actions the future of the Yale graduate school is now seriously jeopardized. The same is true of other major graduate schools. These federal actions involve the financial support of graduate students, and include the following: elimination of NSF traineeships; failure to fund NDEA Title IV fellowships; reduction in the number of NDEA Title VI fellowships; proposed elimination of NIH and NIMH fellowships.
>
> I examined the experience in one graduate school over the past five years in terms of outside support for graduate students from both public and private sources. From federal sources it reached a peak in 1968-69 of around 700 fellowships. It may be a small fraction of that by 1974-75, depending on what happens. The best that I hope for at the moment is that in 1974-75 we will have about 40% of the number that we had in the peak year. Not only are we losing federal fellowships, of course the Woodrow Wilson program was terminated, the New York State regents' program is no longer effective at the graduate level. And, of course, you could match this in other parts of the country, with the California State fellowships for graduate schools-and some of you will know about examples that I do not have.

The reaction on one campus to this was to face the problem by cutting admissions. We, in fact, have an entering class that is about 30% less than it was two years ago, and this is just the adjustment to the initial impact of these cuts.

If we lose, as we well may, a total of 600-800 fellowships over this period of years from outside, we face the possibility of cutting much more.

Now, of course, it would not make sense for me to mention this if I were describing the experience only of Yale or of Wisconsin, but it is painfully familiar to many other campuses represented here. For example, one quite sizeable private university did a similar analysis and came up with a similar picture. Another graduate school reported these figures: 1968-69: 443 fellowships; 1969-70, 368; 1970-71, 299, and so on year after year: 265, 193, 168, 131.

The reaction on our campus to the reduction in admissions is not unique. At one major private university this year's entering graduate class is 35% below that of two years ago; at one major state university, with one of our most distinguished graduate schools, this year's entering class is 20% below that of a year ago – and so we could continue. One of the things which is apparent is that we are at the moment facing hard times for the graduate school and these hard times are having rather visible consequences on a good many public and private campuses.

The relevant question is, "What does the future look like?" And here we begin to consult the crystal ball. The next four years do not look very rosy; in fact, we are in for hard times for the next four to eight years on all our campuses in terms of support, that is, financial aid, for graduate students from outside sources. I am aware, of course, that the Pell bill passed the senate in August and the Green bill more recently passed the House. The Pell bill includes provision for something like 13,000 federal fellowships in fiscal year 1973, and the Green bill includes provision for the continuation of Title IV. I am also aware that the senate has refused to go to conference and that perhaps the conference on these quite different bills may not come until January or February. It is possible, of course, that I am overdrawing the picture a bit. But even if there is agreement on these two bills in terms of fellowship support across the country for graduate students in the conference committee, it is still only an authorization bill. And the question remains as to what funds will actually be appropriated subsequently. I do not think that anybody really believes that 13,000 fellowships will be funded in fiscal 1973, even if that should come out of the authorization bill.

Some people may be saying at this point, "Well these cutbacks are entirely appropriate, given the Ph.D. surplus," though I would not expect to get that response from this audience. Clearly, we have the problem of over surplus of Ph.D.s in some areas and of federal and local policies which adjust to those surpluses where they exist. We must also be aware of the problems in predicting 10 years in the future. I remember too vividly attending some meetings of the National Engineering Society in Seattle, Washington, in 1952. The subject of that meeting was the surplus of engineers that we were going to experience. And it was only a few years later that that surplus had turned around quite markedly.

Some of the assumptions that have been involved in the projections of surpluses 8 and 10 years from now have to be reexamined in terms of the cutbacks that have already occurred on many public and private campuses. Those assumptions are out of date. But even if we assume that there are some surpluses and we need to adjust to them, things are happening at the present time with consequences for quality in graduate education that are serious and that we need to be concerned about.

It would be nice somehow if this were the whole of the bleak picture on at least one campus. Yet it is not the whole of the picture on either my campus or on many other campuses. We have a well-publicized deficit, as do many other private institutions. State institutions, of course, often operate under legislation that does not permit deficits in that sense, but there are still very similar problems. We had a two million dollar deficit this year; it is going to be much larger next year. There is no particular secret about this. The corporation has taken the view that we must somehow get the budget back in balance by 1974-75, and similar circumstances are occurring at Princeton and at a good many other campuses.

That is not the thing that distresses me most as I discuss resources for graduate education; for, of course, resources for graduate education involve the whole of the institution. Suppose, somehow, that on one campus we could be in balance in 1974-75 or that we would take whatever steps necessary to have the budget back in balance three or four years from now, would our problem be solved? I think not.

Economic prediction is, of course, dangerous. But since even the economists disagree, one who is a mere psychologist can afford to stick his neck out as a nonprofessional, an amateur. I do not know what you would be inclined to guess about the continuing rate of inflation of educational costs over the next decade. You know, in some sense, what it has been over the past decade. And I refer here to the cost of fuel oil; not particularly faculty salaries, but rather all those things that enter into the total cost of operating a graduate school as well as a college and the other professional schools. One may even be optimistic if he dares to assume that the average rate of increase in educational costs on any campus, public or private, will be less than 5% over the next decade.

What, then, do you predict as the increase in income stream over that same period, assuming that the budget is in balance when your start? Now, of course, your projections of increase in income will depend upon whether you are working from endowment, depending upon the state legislature, or other sources of income. At least in the private universities one has to be a real optimist to foresee an increase in income stream of as much as 5% in the next three, four, or five years. It could well be 3% and not be overly conservative. If, then, you are in balance in a given year, and in the following year the expenses go up 5% and the income goes up 3%, you are back in trouble. And that is the most disturbing problem that I see when we talk about the resources not only for graduate education but for the whole of higher education, that is, the problem of adequate funds for the institutions in which we are all involved.

The decade of the seventies is likely to be a decade of hard times for at least many graduate institutions. And clearly we are going to have to take some painful steps to adjust to that. Dean Kruh has already suggested many of the things that we might explore, so I will be relatively brief here.

On each campus, whatever the nature of our institution, we face the problem of being much more selective in what we do in the decade ahead than we have been in the decade which we have just completed. We simply will not have the resources, on any campus to do all the things that we might like to do, or that our faculty members might like to have us do. I would agree strongly also that, whatever the nature of our particular institution, we probably have a considerable obligation to do what we can to find ways of cooperating with other institutions such that we do not all attempt to do the same expensive things and, hence, do less well any of the things we do.

Graduate Education Needs a National Planning Council

Joseph L. McCarthy

The present less-than-enthusiastic view of graduate education, which is held by more than just a few persons in the United States and, indeed, which is often manifested by budget curtailments, prompts us all to reconsider the basic relationships and functions of our graduate schools.

During the last 120 years graduate education in the United States has grown enormously in size and complexity. National organizations, relating rather particularly to graduate education, have come into being. In 1904 there was the Association of American Universities, which now functions as an association of the presidents of some 50 research-oriented universities. In 1927 there were the Association of Graduate Schools and the Association of American Universities, which now functions as an association of graduate deans of this Association of American Universities. In 1961 the all inclusive Council of Graduate Schools in the United States was formed. Each of these organizations, and others as well, serves a necessary purpose on a national scale.

But now in this time of questioning graduate education one may ask: Is the existing system sufficient? I suggest that the answer is No, that more is needed – and needed urgently. There is a need for arrangements by which goals and plans for graduate education on a national basis would be developed by a group of well-informed persons drawn from widely different backgrounds, for example, the field of graduate education, other segments of the academic community, industry, government, and the informed public at large. Specifically, there is need for an organization that might be called the National Graduate

Education Planning Council. I would like to suggest an outline for such an organization.

Some preliminary consideration of this type of activity has been developed through the National Academy of Sciences, and it may be desirable for the Council of Graduate Schools to give full assistance to this endeavor. In any case, it seems appropriate for the Council of Graduate Schools, with its broad concern for graduate education, to initiate plans for such an organization.

The primary activity of the Planning Council should be the preparation of an annual report and setting forth proposed goals and suggested plans for graduate education on a national basis. The annual report would comprise a presentation of the considerations entertained and the conclusions reached by the members of this Planning Council. This would address itself to the various aspects of graduate education.

Each year the annual report would provide a significant input to the many persons from varied institutions who are concerned with graduate education, to the members of the Council of Graduate Schools and other graduate school organizations, to members of congress, to federal government agencies, to state legislators and state government personnel, to the public in general, and, indeed, even to graduate students.

Of course, the proposals of the Planning Council would be advisory, and yet the presentation of carefully reasoned propositions should stimulate refreshing, constructive deliberations on graduate education by a broad spectrum of interests. From such proposals and the subsequent discussions would emerge an improved understanding and, indeed, a national philosophy for graduate education.

More specifically, the Planning Council might consist of 20 members. Approximately one-half might be representatives of certain organizations. For example, there might be 10 members that would be drawn from the Council of Graduate Schools, the Association of Graduate Schools, the American Council of Education, the American Council of Learned Societies, and the National Academy of Sciences. Each organization might appoint two members to the Planning Council, each for a two-year term.

To maintain continuity and to provide for administration the two Council of Graduate Schools representatives could be identified categorically as the immediate past chairman of CGS and the president of CGS, who would serve *ex officio* as the chairman and secretary, respectively, of the Planning Council.

The other 10 members of the Planning Council could be elected by the membership of the Planning Council itself and would represent private industry, government, and the public at large, each serving for a two-year term. By use of such at-large elections, the Planning Council would be able to maintain appropriate broad, diverse representation on its personnel.

The Planning Council would need staff assistance. This might be provided by maintaining a well-qualified individual with secretarial assistance in the Council of Graduate Schools' office. This arrangement might allow for carrying out the Planning Council's assignment under the administrative guidance of the president of CGS.

The primary activity of the Planning Council, as already mentioned, would be to develop and to publish goals and plans for graduate education at the national level. This might be achieved through a conference session of several days one or more times during the year. An executive committee with appropriate staff assistance could be responsible for developing a productive conference with publication of the annual report. This could be arranged so that the report would be presented at the annual CGS meeting.

As to the costs that would be associated with such a proposition, interim arrangements might be sought and eventually the enterprise might be supported by CGS.

Significant benefits should flow from the activities of a Planning Council. The graduate schools would receive regularly carefully reasoned proposals from a well-informed group of persons interested in graduate education from several points of view. The members of congress, the state, the legislators, the taxpayers, the donors, and the public at large would receive reliable information and carefully reasoned proposals concerning graduate education from a responsible group of persons who are mainly outside the education community. Such a group should not be suspect of self-serving activities and should be awarded a high degree of credibility.

Here, then, is suggested a step that might be helpful in moving toward the development of better graduate education, the development of a better understanding of graduate education, and, indeed, the development of a national philosophy of graduate education.

Discussion

Dr. Boddy, University of Minnesota: I want to take off from the comments on the article, *Tragedy of the Commons*, which is well worth reading by everybody in every field. The article deals with the problem that arises from each man following his own self-interest, thus somehow defeating the total interest of the community. I suggest that this is a problem that is easy to explore and explain in terms of its effects, but that it is awfully hard to find out what to do about it.

There are two aspects of this problem that are worth commenting on. One is that you should not assume that you can change the behavior of people; that is to say people are usually going to follow their own self-interests. This is a fatal problem of all human societies: change the individual rather than the rules of the game he is playing. It comes down, as the economists look at it, to saying: What can we do about the rules of the game that make the pursuit of self-interest lead to the social interest? Adam Smith thought that competition, under certain conditions at least, would do this. And the market economy is a wonderful demonstration of how well it can do it (though not completely). But, nevertheless, within that kind of construct the problem is still there.

Are the rules of the game such that the pursuit of self-interest, individual, institutional, or whatever, will achieve the social interest? One of the ways to answer the problem from an economist's point of view is to consider what the economists talk about as internalizing the social costs. Try to make the cost of the polluter an internal cost to the man who does the polluting, rather than to society. If this does not work, try some other alternatives. But at least this is one way.

I would suggest that the problem of graduate education is the rape of the commons, and that the problem of the commons is essentially a universal problem that runs through all sorts of fields, and we ought to be thinking more about how we change the system or change the rules of the system or change the goals of the system rather than merely trying to change the individual's behavior with respect to the incentives as he sees them.

A second thing I would suggest is that planning is not the answer, not until you know what you are planning for, and not until you know what the objective function is that the planner is (or should be) intending to maximize by his plan.

One of my areas of minor expertise is the economy of the U.S.S.R., which has the devastating problem of what the planner ought to be planning for and how he operates. The planner's syndrome is, "If a little planning doesn't work, plan more." Because it is the old side influence of the uncontrolled sectors that destroys his plan. The result is a system that works beautifully in terms of carrying out the plan. But nobody is ever able to raise critical questions about what the plan is supposed to accomplish in terms of meeting human needs, or even its own internal needs. Thus I would suggest again that the problem is a common one that runs through all kinds of social organizations. How do you set up some sort of "rules of the game" by which the operators, individually, institutionally, or whatever, in maximizing their own gains from the system, nevertheless accomplish a total system objective.

Education can do something. People make mistakes. They think they are maximizing their own objectives because they do not see what else happens. But the universal problem again is the commons problem. Even if they are following exactly the right plan for maximizing their own objectives, the overall effect may be bad. So I would say again: What we need to do is to think about the rules of the game we are playing and how we can impose better rules or agree on better rules. I think that is the key problem.

Dr. Kruh: I would like to make a number of comments which would indicate certainly very basic agreement with those observations, because I think we are dealing with human nature, and we are not going to change that.

One of the very real difficulties with the proposal for a national planning council is the fact that one is likely to end up with some sort of monolithic pattern, whereas, in fact, I think one of the great strengths of our national graduate, our nation's graduate education, are their diversity.

Nobody really can agree on what the needs are, so setting the goals is a very difficult, if not impossible, exercise under our free society. And yet each of us, even in our own institutions, does make choices every day. This is the basic thing we do in any limited economy. All I would say, at least as a beginning premise, is that some of the choices we make in regard to the efforts we undertake ought to be made with an awareness of the choices made in other institutions, so that we do not all end up with programs in atmospheric science, say, and none in molecular biology.

Boddy: A recent example of national planning, the French planning system, does that. It is not an imposed plan; it is essentially trying to find out what everybody else is planning on, so that everybody knows what other people are doing. Now this has tremendous advantages, but it still does not attack the basic problem of the commons.

Dr. Pelczar: This bothers me a little bit in terms of an expression of an inability to plan, or some reluctance to plan. As Boyd Page commented in his statement at the meeting last year, there are other people in the act already, and if we are not able to inform them of the inability of their accomplishing this, they will go ahead and we are very liable to end up with something that will be very detrimental to the enterprise as we would like to see it. Some sort of a dialogue needs to be maintained to defer a kind of planning that might be imposed upon us if we simply remain aloof from some involvement of a nature that indicates that we are indeed trying to maintain some national surveillance of what is being done or what is being contemplated.

Voice: In general I very much applaud the tone of Dean Kruh's remarks and agree wholeheartedly with the need to evaluate programs on our own campus, to consider merging and discontinuation, to evaluate on the state level, and to profit from any advice we can find on the national level. However, he is misinformed with respect to a recent action in the State of North Carolina. For the record I wish to point out that North Carolina did not establish a coordinating agency with arbitrary powers. The state has consolidated the 15 university campuses into a single University of North Carolina, which will be effective July 1, 1972. Many of us look to this as a very hopeful mechanism, with a single board of governors, a mechanism in which the institutions themselves may cooperate more effectively than they have been in the past with respect to the allocation of resources and to support the program within the state.

There was a critical note in Dean Kruh's remarks concerning the coordinating agency. And I wonder why that is bad, at least in principle? Is it not in line with your desires that at the state level there be effective coordination programs? And even though in some states efforts toward a coordinating body may not have been ideally established to guide us in the past, would it not be an effective step in the future for states to have a working coordinating agency to guide programs across higher education within the state?

Kruh: If I cast a pall over the coordinating agencies I was simply quoting one of our national organization's observation on that point. I think certainly the need for coordinating is clear, at least I hope I made it reasonably clear. Certainly these agencies do perform that function and, in many cases, do it quite well.

There were some reservations, however, expressed about the effectiveness with which some of the agencies carried out this work. Some had more or less staff service and more or less input from the institutions themselves, so that in some cases there is a feeling of an insensitivity. I am not really categorizing the coordinating agency as being either good or bad. Fundamentally the plea I am making is for coordination. And I will even say that coordination can extend beyond state boundaries. And, to that extent, a state coordinating agency is only a first step.

Voice: With reference to what the gentleman from North Carolina said, it might be of interest for him, and perhaps for some of you, to know that Wisconsin has recently gone through what we at Madison have regarded as a rather traumatic experience known as merger, which means that all the state institutions are now, as it were, one. Along with this has come the demise of the coordinating group – which North Carolina apparently has just established. And I think I am right in saying that there were no mourners at the burial.

Dr. Alpert, University of Illinois: I would like very strongly to support the idea set forth by Dr. Boddy. Too much of the conversation about graduate education is directed along the lines of the delivery of graduate education, of higher education, as a product: so many degrees, so many students, so much output. Before we can talk seriously about planning, we have to search again for what the goals of the whole activity are.

Jerry Wiesner, now president of M.I.T., some time ago described all of civilization as a learning game, a game in which society, generation after generation, was learning what the rules were, what it was all about. And it strikes me that if our institutions of higher education have a worthy purpose, it is to be the focal point at which, and by which, our society finds out what the rules should be.

It is interesting to note that industry in our society is afflicted with the very same problem that has been described here for the university: too much productive capacity. You could chop out half of the industries in this country, and the other half, with virtually no exceptions, could turn out all of the production that we are capable of buying, with hardly any additional capital investment.

We should be very careful in thinking about our efforts. If what we are doing is talking about the number of students, or the number of degrees, we could turn out twice as many with twice as much, that is, twice as many traineeships, etc., and still not address some of the central problems of our society. If we have to depart from the traditional graduate education, then we have to begin to take a new look at what our role is toward new understanding as well as toward new knowledge. Because if we do not do it, I do not know what aspects or what institutions in our society are set up to undertake it. Unfortunately, we are not very well prepared for that function. But I think if there is something nontraditional for us, it is that new understanding; it is looking at problems in the time constants that these problems can be dealt with. And they are not on the time constant of the five-year profit cycle of an industry.

However much IBM would like to solve a problem, if it is a really tough one, they cannot do it in the five years that thay have to turn it around. And so as Boddy suggested, we have to look at the rules of the game. We have to examine whether the only parameter about higher education is the word "quality," a term defined by the experts in each field which describes what their particular game is about and defines the goal in terms of the particular brownie points that they wish to make.

I think that each of us separately as an institution has to go about the serious question of allocation of priorities by asking what other parameters have to be looked at. Now each of us in the last year or two has begun to do this. And we go about the game as follows: What are the purposes of the institution? We can rapidly enumerate 27, occasionally 28, objectives. What are the criteria by which they will be judged? We can rapidly list up to 38 criteria. Which indicator shall we use for each of these criteria? There are at least 5, 6, 8, or 10 that can be used. And then all we do is have these objectives and criteria, hand these indicators to our administrators, and say, "All right, now apply them to the hundred departments and programs you have and solve it." I think if we have a national discussion here it should be to start to discuss how we as individual institutions set goals and how we judge whether we are reaching them.

Voice: My department is going to the Board of Regents in January with a new Ph.D. program. Now if the department were named the Department of Civil Engineering it would be simple – but no, the department is now called the Department of Civil and Environmental Engineering. Now here is something we have been working for for the last 7, 8, 9, 10 years. We have hired faculty with the idea that eventually we would launch a doctoral program in this department. The department has grown, and we have sufficient people – around 15, almost all with a Ph.D. There is no question about the quality of the faculty. There is no question about the quality of the vast program that they have been sponsoring over the past few years. The external consultants have reviewed the program and they say the department is qualified, no question. There is no question internally with the graduate council.

How do we solve this problem—the Board of Regents—in light of the Carnegie Commission report and in light of the remarks made here tonight; how do we convince the department they should not offer the doctoral program in civil and environmental engineering in three classical areas: structural mechanics, soil mechanics, and environmental science? Just how do we confront that problem in light of all the remarks which were made—and with which I am in agreement?

There is no question in my mind that all of the other engineering departments at my university that offer the doctoral program have a considerably enhanced undergraduate program because of the encouragement of programs. The department of which I now speak has a considerable research program, and they are fearful that in a couple of years they will not be able to attract research funding. One response would be, well the money will go to other universities.

One of the problems is that the chairman of the department has just written a beautiful report showing that most of the research carried on in this department has been of local orientation, to give a specific example, soil mechanics. We have specific soil problems in the State of Rhode Island that do not exist in other places. And the results of the research have considerably lessened the tax burden. Just what do you do in this kind of a situation?

Pelczar: I am sure that your particular predicament can be recited for other solutions; if not right now, not so far down the road. And I suppose, again, this relates to goals and planning and some understanding and commitment in advance as to who will be doing what.

Voice: The only question is, What are you doing in German, and what are you doing in English Lit., and so on? The question is not whether one has a program that is felt to be important and relevant for that Ph.D., but what is one doing wrong? It may be that the thing to do is to encourage Ph.D. programs in environmental and civil engineering, if that is the way the thing should go. But it does not mean you have to carry along on its back every other Ph.D. program that somebody wants to introduce, when their resources and their relevance do not warrant it. So I think it is a mistake to look at an individual program.

We have got problems of high magnitude. And when we look at aggregate statistics and output and so on, I do not think we confront them by saying that there is a program that I have to look at now as a graduate dean and decide whether it should go or should not go in terms of that program, because that program is not going to affect the aggregates. It is really a question of where do I belong in going, and where do I belong in not going. We should go with the ones that are right, and not with the ones that are wrong. It is that kind of a judgment. I do not see any contradiction.

Dr. Taylor: I have some problems back home, too, which you reminded me about when you raised this question. One of the things that has been most widely accepted among my colleagues, both those who have administrative responsibility and those who are members of the faculty, is that we have to be selective on one campus in deciding what we can best do. The corollary, of course, is that we should give up doing some things. Well, what I am looking for is that step-by-step process, that change in the rules of the game, if you like, on a microlevel, which leads to giving up doing something. Now I have discussed this already with several of the deans present here whom I happen to see frequently, saying, Have you discovered a way by which you stop doing something? And I do not have an adequate answer. So with this very much larger group I want to raise the question: Has anybody here discovered the right way to change the rules of the game in order to stop doing some of the things that you know you are not doing very well.

Voice: You are posing a double problem. The problem I was suggesting was the total population problem. You are posing the microproblem of a particular institution's response. It would seem to me that the problem of a particular institution is, again, a purely economic problem for the allocation of resources within the institution. And there are lots of uncertainties about this, and there are lots of political problems and forecasts of the future involved.

But it would also seem to me that you could set up some sort of general principle of maximizing the usefulness of the way you use your own resources. But you will have to decide whether the maximization is to have a large number of pretty good programs or a smaller number of first-rate programs. And this again you would have to use your own judgment on. But it would seem to me that the idea that everything ought to be good, or that you want to do everything, is obviously false. Now where you go from there depends partly on institutional traditions, partly on the sort of ethos and aims of the faculty, and partly on how much information you can bring to bear on this problem. And I think that last one is the hardest.

Taylor: We have taken at least some of these things into account. As I think back a year, we discussed it in the Executive Committee of the Faculty and the Executive Committee of the Graduate School as to what action should be taken. And in all of these areas there was agreement that we should follow these general principles. But somebody had to take the action. And, not entirely joking, I think it happened in the corridor one day in front of my office. But somehow that is not a democratic, or even a very broadly participative way in which one makes decisions to stop things.

I did bring this up with the committee that we have examining the future of the college, and I said, Well how do you go about stopping? And one of my distinguished colleagues said, "There's one thing that's clear: that has to be done in a fully autocratic fashion—and I'm not quite comfortable with that."

Dr. Deener: Dean Pelczar, when we planned this session on developing a national philosophy for graduate education, little did I think we would have two solutions; that proposed by Dean Boddy, which is genocide, and that proposed by Dean Taylor, which is murder.

I did want to ask Dean Boddy a question about the way the rules of the game, as he put it, might be changed. Somewhere in your remarks about costs and competition in a system, you mentioned that one of the ways to get self-interest directed toward the common interest is to internalize some of the costs.

May I suggest, by asking a question, is that not exactly the solution that is being proposed to us right now? The solution that appears to be worrying us all is simply, now that the funding agencies have moved out, graduate institutions are having to pay some of the social costs. The costs of graduate education are being internalized, and it hurts. But maybe that is a solution, just let it hurt. And Dean Taylor will one day either resign or become autocratic.

Those institutions that want to have traditional research-oriented Ph.D. programs will simply pay the price. They may have to have small ones, and probably fewer of them; but they will go about their business, and in 1984, they will be rediscovered, like the wheel. And it will be a great thing.

On the other hand, there are those growing numbers of institutions discussed today, as having large numbers of part-time students. Toward these institutions, I think the proper role of the traditional graduate school is: do not meddle too much with these institutions; do not try to tell them what residence requirements or other requirements must be. Because the traditional institutions are not trying to bake that cake. It is not their job.

One final comment. The talk of Dean McCarthy which of necessity was read for him was by design a call for some sort of action by graduate deans to meet the present situation.

If this group of graduate deans cannot really respond to such a call, then I do not see that there is much to do except accept the fact that society is internalizing many of the costs of graduate education. But, be prepared, it is going to hurt.

Realistically, is there another solution? Is the Council of Graduate Schools a device for doing something about the situation? From the response to Dean McCarthy's call, apparently not on the policy or planning level. Is there anything below that level, then, that we could do as a group to help make either genocide or murder more palatable?

Boddy: There is one point: An awful lot of people do not realize that a graduate education, like most other systems, has a feedback system. And if, in fact, the kind of education we are producing is not the best kind of education in the view of the people who are taking it, it will change. Our problem is our pipeline. It is the lags in the system that are against us, rather than the lack of feedback.

A person enters into a Ph.D. program with his view of what the market or prospects are now. He is produced 5 or 10 years from now. We have not told him very much about how to find out, or how to predict, what the future will be 10 years from now. So one of our problems is, I think, to get more information to people. If we give more information to people the feedback system will still work badly because of the pipeline problem. But it will work very much better than it now does. I am not extrapolating trends, which is a very nice thing; it is like the cycle in agricultural economics: last year's prices determine this year's output. If any farmer used that for a few years and did not take advantage of it, he is crazy. If a person entering a Ph.D. program really visualizes that the market is going to be very bad and still wants to go ahead, fine. But if he is mistaken because of getting bad information, it is partly our fault for not telling everybody.

Voice: Perhaps the problem of the commons is not that there are too many cows being grazed but that maybe somebody might like to move us off and play golf on the common. The same turf, the same dollar, the same purpose, or the same facilities are wanted by others. We have not spent much time looking at the nature of the enemy, or whether the competitors are supposedly friends. Who is after us? Maybe we had better spend a little time and find out who they are and what they represent. Indeed, there are different groups that are attacking graduate education. I might be useful to take a look at them.

I am suggesting that we have, one way or another, created enemies of different kinds. Some of our friends who would like to be doing what we are doing—I think Bill Ferrante's problem is partly this—are now our enemies, antigraduate school, as it were, because they would like to share the turf and we are not sharing it. Others of our enemies are undergraduates where there are pressures from parents for admissions, and we are holding so many places in the university for that useless graduate stuff. It would also help us to look at the federal government and find out who is opposing graduate work or cutting the funds and why, examine these, and look at several solutions. When we abstract them at the national level they become so unspecific as probably to be useless on any given campus.

Kruh: The air that I now detect over us is one of despair; in fact, I guess I must confess that there was a certain element of despair in my own remarks.

One of our problems has been relating what we are doing to the public, and defining to society what it is an education really accomplishes. One of the things that we have done is very self-defeating and that is to use a rather short-term feedback, or short-term payoff idea in representing the worth of intellectual inquiry. Many of you are acquainted with the study done, by the National Science Foundation, in which physiological and chemical research dating back to the early 1900's played an important part in the development of the birth control pill. So we all know the story about the fact that a great deal of intellectual inquiry does not have a rapid payoff, but we get ourselves in a box by saying that. In fact, how do we defend, for example, the study of literature and language on the basis of quick economic payoff?

What we are really talking about here is our most fundamental asset, the intellect of our society, and how we might cultivate it to make a better society, a better civilization for ourselves. And we are facing a political problem where that process is a very long term one.

Dr. Boddy referred to the long response time in the system; in fact, that response time in generally longer than state agencies are willing to look at. I have to apologize to the private agencies here; but I think we are all very much aware of the fact that the state legislators are looking at a very short time scale. We have been selling, and they are not buying. It is our responsibility to define to the society in which we live what the educational needs are. Maybe the answer is that we should have some sort of platonic leadership. The autocratic solution may not be such a bad one after all. But I do not think anybody really expects that to happen.

What really distresses me is that we are in many cases dealing with irrationality. The gentleman referring to his new program puts me in mind of an existing program that we have which, at our particular kind of institution we never would have thought would come under a threat. And yet our state budget director is bringing under direct fire our programs in agriculture, which have demonstrably demonstrated their capacity to contribute to the state's economy. Why this is happening I cannot say. I just simply have to say it is irrational. And, therefore, I do sense a kind of despairing. And although I hate to end on that note, it is there.

Dr. Fraenkel: I wonder how many institutions that grant a Ph.D., other than perhaps a few technical institutions, do not give a Ph.D. in English, American history, French, all the most popular programs. Those are obviously not the most expensive programs. But how many institutions give Ph.D.s in Arabic literature, South Asian studies, Indian history, and things in the international area which are obviously very important to the United States as a world power as well as intellectually important?

There are similar kinds of problems on the domestic scene. There are new kinds of programs that are not popular which many institutions are involved in, and these are terribly expensive in terms of faculty input compared to the number of students. And yet we always seem to talk in terms of generalities.

In economic terms—cost-effectiveness, or whatever other sorts of words we get from the Bureau of the Budget, which really have no relevance to the practical problems on our campuses—we have too many programs in English literature, and there are not enough students to go around in German to fill up more than one or two of our Ph.D. programs in the United States. And how do we get at these things, as compared to English literature? I do not think you can do it by economic analysis or the kinds of things that Dr.Boddy was talking about. When you look at what you can try to cut out, once you cut out German you have a tenured faculty and they would like to do some graduate work. In a private institution you cut out a little tuition income and you have cut out a Ph.D. program. But you have not changed anything. So the practical problems are very severe. And also you are not going to convert your tenured people who are concerned with medieval German literature and history of language and philosophy to teaching Russian. They would be lousy teachers. And you would not have enough of them to go around. These are real everyday budgetary problems that come up to be solved in a single institution by any sort of overall economic analysis or studying priorities.

Dr. Crawford: We have a brilliantly successful, demonstrably powerful and effective benefaction for society in graduate education in this country. It is quite clear that it is the finest component of education that has ever been known in the history of the world anywhere. And at the time when fellowship support has been withdrawn by the government and our students point out that it is irrelevant, we are worrying about how we can prevent an able group in civil and environmental engineering from instituting a new program which is clearly a good program. Looking ahead, I think statistics will show that over the country graduate enrollment is up. What do you suppose is wrong with these young people who want to come to graduate school, who seem to think that in spite of its irrelevance, its lack of appreciation by society, and the lack of confidence on the part of the graduate deans, they still want to come to graduate school?

Pelczar: This past spring a rather large group of deans and representatives from all the agencies that are involved in the predicting business of what the graduate student population is and will be concluded that, no matter what, people were going to opt for more education and, accordingly, we will see this growing number of individuals that have the aspirations and the ability to take advantage of what we have to offer them.

Fourth Plenary Session: Costs of Graduate Education

Friday, December 3, 1971, 9:00 a.m.

Presiding: David R. Deener, *Tulane University*
Joseph L. McCarthy, *University of Washington*

The Gradcost Study

David R. Deener

The usual task of a presiding officer is to present the speaker, but if you have looked at your programs you already know that the speaker is not here. I think Dean McCarthy will set a record of having given three speeches at a convention at which he was not in attendance. Dean McCarthy did have to return to Seattle. He left not just one copy of a speech, but three: one dated November 11, one dated November 16, and one dated November 21. All three are a bit out of date regarding the present status of the Gradcost Project. So what I propose to do is to describe breifly the origins and mechanics of the Gradcost Study and then report roughly where we are and how close we are to finishing up.

Very briefly, the Gradcost Study formally commenced about a year and a half ago, following an earlier year and a half of planning and negotiating. It is sponsored jointly by the Council of Graduate Schools and the National Association of College and University Business Officers (NACUBO). The study is funded by a grant from the National Science Foundation. It was designed to survey the literature that exists with respect to the costs and benefits of graduate education and then, based on this literature survey, to attempt findings as follows: to determine the major elements of costs and benefits; to identify alternative procedures for allocating costs and benefits; and, finally, to see if there are reliable data indicating what cost ranges might be with respect to programs in various disciplines in various institutions.

To conduct the literature search a research group was established at the University of Washington under the direction of Dean McCarthy. The actual working staff consisted of two economists, John H. Powell, Jr., and Robert D. Lamson. They did the literature survey and made a report to the Joint Gradcost Committee, consisting of members of CGS and NACUBO.

As I will point out later, the Joint Committee is hung up on a few things, which explains why we do not have a full report today. But out of this exercise will come three items that will be made public. The first is an annotated bibliography of the literature relating to costs and benefits. This has already been completed by Powell and Lamson and is ready to go to press. This bibliography, which annotates and indexes about 200 items of literature, will be distributed to the members of CGS and NACUBO. The second part of the study is an analysis and review of the literature by Lamson and Powell. It is entitled roughly, *Elements Related to the Determination of Costs and Benefits of Graduate Education.* This, too, is ready to go to press and will be distributed to members of CGS and NACUBO. The third part of the study is based on the review and analysis of the literature just noted. It is a smaller summary report with commentary which we hope will bear the authorship of the Steering Committee of the Joint Gradcost Committee, or at least of some business officers and the graduate deans. But here is where we are hung up. There are some points of difference between the business officers and the graduate deans, which I will mention to you as we proceed.

Let me turn to this summary report with commentary. Very roughly, what we have tried to do is make a brief description of the literature that exists in various areas and then write a commentary on it, pointing out what is valuable, where the holes are, and what some of the unresolved problems are. Then, from the graduate deans' point of view, without saying, "This is the best way of doing something," we attempt to point out what can be done or what has been done, and then what might be appropriate alternatives, depending upon institutional aims and other factors.

It is with respect to this commentary that we have one of our differences with the business officers. We are all pretty much agreed that the literature says some things and does not say other things. The point of difference is whether we should say anything in the absence of the literature saying anything, or in general go beyond the existing literature.

Now let us take a look at the overall nature of the literature relating to costs and benefits of graduate education. Many of you received from the University of Washington a dragnet letter asking for references to and copies of articles, books, and cost studies. As a result of this dragnet letter, well over 2,000 separate items were indexed and analyzed by the research group, including 30 to 40 cost studies. At this point, a very real limitation of the Gradcost Study may be emphasized. It involves the actual cost studies made available. We know that many existed but were not sent in. Frankly, then, the gradcost study has a serious limitation: its analysis of actual cost data is based only on those cost studies submitted.

Cost studies aside, the literature in the United States on costs and benefits of graduate education goes back at least to the 1890's. As Dean Cooke has mentioned at various times and places, much of what is being said now is not new; it has been talked about before. There have been some changes in the literature over the years, however. The very earliest literature tended to blur any distinction between costs and benefits. As a matter of fact, the earliest writing almost ignored benefits, probably because it was felt that these needed no definition. Everybody assumed there were benefits. The more recent literature makes a clearer distinction between costs of education and its benefits, and also reflects the need felt by some people to evaluate cost information in the light of the benefits received.

Up until the 1960's, whatever cost studies were made apparently had a dual purpose. One was to justify requests for more money, either from legislatures or from alumni donors and, second, to promote some economies in university operations. Not too much attention was paid in the literature to variation in costs with various factors which we now think important. The tendency was to use average cost information, and not to go into incremental costing, which some people feel is at the heart of the matter today. Hence average costs by the 1960's were what most people were looking at. This is reflected in a great many of current cost studies. Whatever benefits were discussed were usually phrased in intangible terms, although there was increasing attention to the problem of benefits. Little of the literature looked upon higher education from an economic point of view, that is, as a producing unit that has to get certain raw materials and then sell something.

In contrast, some of the more recent literature does make the analogy between the university and a producing unit, emphasizing that it is necessary for the university to get certain types of capital equipment and other things and that it has a product to sell to many clients. These clients may be individual students, state legislatures, federal agencies, private foundations, and private donors. The literature places great stress on relating cost information to outputs of higher education. Hopefully, if the relationship of costs to outputs can be determined, then costs could be further allocated to benefits. Presumably then the university could make clients, those who buy, understand a little bit more about the costs involved.

There have been some attempts to get into very elaborate types of analyses such as linear programming, etc. But as yet, very little has appeared in the literature that would enable a graduate dean to make these concepts operational insofar as his own institution is concerned. On the other hand, there seems to be more general agreement as to what are inputs, their definitions, what are outputs, their definitions, and what are benefits, but there has been very little general acceptance of ways to measure these in any quantitative manner (although people are attempting to measure them every day).

Finally, the most recent literature reflects the mood of the last couple of years, the so-called crisis of the 1970's. This is about the overall view of the literature. Our general comment on the literature is this: the literature tells you a lot but not all that you want to know. Particularly on the problem of quantitative measures, there is still a long way to go.

Now let us turn to some of the points where there is help from the literature. First of all, the more recent literature does pay attention to outputs and benefits and attempts to distinguish between the two. The outputs of graduate education as they have been identified can be summed up as follows. One output is the degree, the Ph.D. or the M.A. For various reasons, some find it desirable to fractionate the degree into credit hours or courses. As a result, quite a bit of cost analysis does not use the degree as a unit, but rather credit hours or courses or some other segment. There are other outputs that probably are not theoretically necessary to the degree, but consist of activities or other things that happen in connection with the offering of a degree program. Thus, a teaching assistantship may be considered as an output, or a research assistantship may be so considered. Further outputs consist of the new knowledge that is created through the graduate degree program and is embodied in masters' theses, doctoral dissertations, and the research that a graduate faculty engages in in the course of conducting a graduate program. Incidentally, one of the points of nonagreement in the study is on the issue of what research should be counted as part of the graduate degree program and what should not. In some instances, there is a public service element which might be considered part of the degree program, for example, an internship which also provides a service to the community. On the other hand, there are other kinds of public service carried on in an institution which clearly are not integral to a degree program. Finally, there are a number of so-called outputs that may benefit somebody. For example, a library that is developed to support a graduate program may actually be used by many people (alumni, general public) other than the faculty of those pursuing a degree program. Many university libraries are federal depositories and have to be open to the public. Other university facilities designed to support a graduate program also may be used by the general public or a public within the university wider than the graduate faculty and graduate students. For example, theaters to house an M.F.A. program that are also used for performances open to the public. Also, lecturers brought to the campus primarily in connection with a graduate program may give lectures open to the public, presumably this output has benefits to other than those within the graduate program.

As to benefits, they also vary, as do the beneficiaries. The literature, as noted, is paying more attention to benefits and beneficiaries. The beneficiaries would be the individual student who gets a degree, the general university that offers the degree program, and then society at large which receives benefits from the outputs of a graduate program. To illustrate, it is presumed that the Ph.D. holder will play a more productive role in society and hence increase not only his individual productivity but the productivity of the system as a whole. From the research that is conducted as part of a graduate program comes new ideas and these are presumed to benefit society. At least one can propose the case that without this research one would not have the highly industrialized society one has today. Suggestions have been advanced that some sort of dollar measurement can be made of this increased productivity.

Moving along from the outputs and benefits, we come to an area of the literature which has a familiar ring, that dealing with direct costs and indirect costs. Several ways of allocating indirect costs are noted in the literature. One way is a very simple method of taking everything that is not in departmental budgets and then allocating these costs forward on some formula basis to the departments. Another way is a very sophisticated system of allocating certain service costs to intermediate users (such as a library), and then reallocating the augmented costs of the intermediate users to the operating departments.

The general conclusion we have come to is that the degtee of sophistication to be used in allocating indirect costs is a matter for individual institutions or decision makers to decide. It is not at all clear that the degree of precision obtained by using the most sophisticated indirect cost allocation method is worth it for many purposes. It may be worth it for some purposes but not for others. On the other hand, the literature clearly warns against taking direct costs and assuming that this reflects total costs, or, to put it another way, warns of the danger in selecting a simple indirect costing method involving little or no allocation, and then assuming that the results reflect what would happen if there were more complete allocation.

Now let me turn to the two or three areas where the study is still open, so to speak. First, research costs. These have probably given more difficulty than anything else. From the literature there appear to be at least two ways of approaching research costs. One approach begins with the total costs of educating the individual; total societal costs, we may term them. These total societal costs are a conglomerate, consisting of three separate sets of costs each with a different focus. Certain costs focus on the individual student. To illustrate, there is the cost of maintaining him while he is in school. Again, there is the cost to him of going to school rather than getting a job driving a milk truck – the so-called lost opportunity cost. Other costs focus on the university. Very roughly, these are the costs of maintaining a faculty and providing the buildings and the equipment necessary to put on a graduate program. The third set of costs seem to reside in, or to focus on, society at large. An example is lost productivity: assuming that the student could have gone into a productive job instead of being in school for five years, a certain amount of productivity is said to be lost. There is also lost taxation if you assume he would have earned some taxable salary (although the IRS may be rapidly curing this in the case of teaching assistants). One could also say there is a loss of revenue to society as a whole because educational property is tax-exempt. In any event, there are certain costs that we might say are borne by society or reside there.

Most educational institutions naturally are primarily concerned about the middle of these three components, namely, the costs that reside in the institution. How to regard these costs really is the heart of the matter of cost accounting. Dean McCarthy and myself have come to the general conclusion that cost accounting must begin with a concept of the "total cost" of a graduate program. This total cost of a graduate program, as we see it, is the amount of money needed to get the faculty and to get the buildings, supplies, and equipment needed for teaching and research, plus the students that are to be taught. If this concept is accepted, if it is accepted that research is a necessary component of a graduate degree program and that there is a cost in getting students, then certain propositions and problems follow.

The real problem, in my opinion, is not so much the cost of the Ph.D. program as who pays. If an institution offers a program of a certain kind, a certain quality, if you want to put it that way, and in this program the professors want to do research as well as teach in the classrooms, then somebody has got to pay for that research. If an institution wants a certain type of student that it cannot get unless it offers fellowships or financial support, then somebody has got to pay for that, too. On these points we may expect to find differences of opinion among our conferees. In any event, this is the concept of the total cost of the graduate program that Dean McCarthy and myself advocate. It is my personal view that it is up to each institution to decide what kind of graduate programs it wants, and its decision will indicate whether it will require a lot of money to get graduate students and a lot of money for research or not. Then we return to the question, who pays the money?

One could imagine a situation in which the graduate student pays a significant part of the costs. He would pay his own maintenance and tuition (and thus help offset the cost of the faculty). This is the typical pattern in undergraduate schools. It is not the pattern which many, if not most, graduate schools are used to, but it is the pattern that is being suggested from some quarters in Washington. It is an attempt to internalize some of the social costs, by proposing that the graduate student should be treated as a professional student and should bear an increasing portion of the cost of maintaining the faculty, the equipment, and the other expenses of a graduate program. Whether the graduate student will, of course, is a question to which we do not have the final answer. If he would, then graduate education might be halfway home. On the other hand, if it is accepted that the cost of the graduate student is a part of the cost of the graduate program and if the institution is committed to subsidizing or shifting the incidence of maintaining the student from the individual to the institution or to society, and society does not pick it up, there is a real problem. The institution is stuck with either finding the money to pay the costs, or changing the cost structure of its programs. I do not believe there is any accounting device that will make that problem go away.

The same kind of analysis applies to research. If an institution has a graduate program which has a heavy faculty research component, say of 50%, either the institution pays for it or it gets somebody else to pay for it. Who is the somebody else? Well, it has been NSF or NDEA; it has been NIH; it has been the state legislature. Or it has been an external donor or the institution's own endowment. But if these clients, so to speak, do not wish to pay for research, then the institution must face up to the problem. If it wants the research type of program, and if clients are not willing to put up the money, then it has a rough decision to make. Does the institution take the necessary money out of its own funds or does it drop the program? One can take the approach that research is not a significant part of the Ph.D. program. In some quarters, there seems to be a feeling that this might be the solution: to eliminate research from the research doctorate. Dean McCarthy and I think it would be highly damaging to the research doctorate to accept this approach just for the sake of convenience over the next several years.

In any event, this is where we stand on these questions involving graduate student assistance and research. It is up to the institution to define the size and the kind of Ph.D. programs it wants. If the programs have a high research factor and require a goodly number of qualified full-time students, then the institution must either find somebody to pay the costs, for example, the student himself, the state or federal government, or some segment of society, or the institution must pay the costs itself. The alternatives are to give up the Ph.D. programs, or change the nature of the programs. I do not believe accounting, cost or otherwise, is going to change the basic situation.

One area that may deserve more attention is the broad area of benefits. Of the various outputs of graduate education which provide benefits to society, most of the stress over the past decade has been put upon trained manpower. Production of trained manpower was the heart of the NDEA program. On this point, Dean Alpert made a good comment last evening when he said that it is really new ideas and new knowledge that graduate education is all about. Nonetheless, graduate education sold congress and the state legislatures on the idea that trained manpower was what society needed: somebody to teach somebody, somebody to run a lathe, somebody to work a computer, somebody to ride a ship to the moon. Too little emphasis was placed on the proposition that none of these things could be done at all if there had not been the research in the first place.

Perhaps it is now time to consider the question, What difference does it make if there are differences of views between graduate deans and others concerned with graduate education as to costing graduate programs? We might begin with one of the major projects currently underway. This project proposes to divide university activities into three primary programs: instruction, research, and public service.

If a university's activities are cost analyzed on the assumption that there are these three primary programs, then there is a real danger that in many instances unit costs of Ph.D. programs will not include full research costs. How can this happen? Easily, if sponsored research is budgeted separately. In the case of a university which has little or no sponsored research, most of the costs of maintaining a quality Ph.D. faculty and supporting its research will fall in the instructional budget. Its unit instructional costs will be high. In the case of a university that attracts a lot of sponsored research, part of the costs of maintaining its graduate faculty and supporting its research will be subtracted from the instructional budget and placed in the sponsored research column. Its unit instructional costs will be low. To compare unit costs in this instance would be misleading. It is obvious that you are comparing an institution which, for one reason or another, does not receive much grant support from outside clients with one that does receive a considerable amount of such support. But it may not be obvious that you are not comparing *total* costs of graduate programs, but rather *net* costs of the programs to each university. And cloaking net costs in an average unit such as the credit hour further compounds the danger.

Average cost units present other dangers. The credit hour, for example, as useful a unit as it may be for some purposes, may be less than useful as a unit to analyze program costs. For one thing, a given number of cost unit credit hours do not add up to a degree, the basic output of a graduate program. A better measure of a graduate program must, in my opinion, relate costs to degrees awarded. True, some graduate deans have pointed out that emphasis on a degree awarded may overlook the possibility that there is some value to be placed upon a course completed or a year's work done. There may be some validity in this.

Most difficult are the problems of qualitative measurement. We all wish there was some way to measure accurately the quality of research (or even the quantity of research) not to mention teaching. Faculty and administration attempt to make such measurements, to say that A is doing a better job than B, all the time in promotions, tenure, and salary decisions. But the literature is not overly helpful on this point. More will be said on this when Dean Lester takes the podium to talk about the Roose-Andersen report.

Now to the final part of the Gradcost Study. One of its more heat-generating parts concerned whether we could find ranges of costs of graduate programs. We did, but I am not sure we know what to do with them. In the first place, the cost studies that the research group had at hand varied widely in the way they were done and what they attempted to do. It was not possible to use all or even most of the studies for any comparative purposes. Four or five of them, as I recall, were similar enough, though done at different times, so that if updated to take inflation into account, they did provide some indications of the differences in direct instructional costs per student per year for certain programs at certain institutions.

A basic question that arose was whether we should publish the ranges we found. There was a cogent argument against publishing in that the figures could be misleading and misused. They can in no way be considered as definitive, yet might be picked up and quoted as if they were. On the other hand, they are already in the literature. We felt that they could be assembled and discussed from the point of view of demonstrating how sad the general state of the art is. They could demonstrate the need for much more sophistication in the art and serve as a warning before anyone begins using these types of studies for comparison of institutions or as the determining factor for decision making at individual institutions. Please bear in mind, however, that this is not to say that any of these studies are unreliable as far as the institution making them is concerned. It is to say that in view of the great variety of graduate programs and graduate institutions, current costing techniques hardly provide reliable data for comparison. Further, cost alone is not the proper basis for judging individual programs; benefits must be considered.

Now to the studies themselves. The studies used covered some 20 departmental programs in institutions of a public nature. The number of programs in any one discipline covered varied. For example, in the area of physics, there are over 110 Ph.D. programs; and the cost studies covered 9. For direct instructional costs in these 9 physics programs, the studies indicated a range at the doctoral level of from $1,600 to $11,000 per academic year. In another area, English, for 9 programs at the doctoral level the range was $1,100 a year to $3,500 a year. In history, the range for 9 programs was about $1,200 to $5,000 per student per year.

The above examples will suffice to illustrate the point that the literature does indicate considerable variation in costs. In numerical terms, the ranges of variation appear significant. But these bald numbers in themselves are not proof of anything, though they may be indicators of something of educational significance. By way of illustration, figures for the doctoral level and the master's level at one institution indicated the master's costs were higher than the doctoral costs. This runs contrary to the conventional wisdom, but it could happen. It could very well be that at a particular stage of program development at a particular institution the cost of educating a master's student would be higher than the cost of educating a doctoral student in a particular year.

Part of the task of theGradcost Studywas to analyze whatever cost ranges we found. The ranges we found do indicate that the hard sciences and engineering, as you might expect, rank higher in direct instructional costs than the humanities, social sciences, and others. An attempt was made to see if there was any relationship between costs and the perceived quality of the program as evidenced in the Roose-Andersen and the earlier ACE reports. There was a slight positive correlation, but it was not of statistical significance.

One point did emerge a little more definitely concerning the size of a program and costs. It appears that as the number of students in a program increases, costs per student at first decrease, then level off when a certain size is reached, and finally begin to go up again as numbers increase. Our analysis did not permit any conclusion as to what the critical cost mass might be, only that it appears to exist. But it does seem that a graduate dean could find himself in the situation of having a program too small to operate "economically" but costing too much to increase in size to operate "economically."

In general, the Gradcost Study suggests that the art of cost finding in higher education is in many respects in the very beginning stages of development. While individual institutions will have to cost account, drawing detailed conclusions, particularly of a comparative nature, is at this stage very risky. Cost studies do indicate that within American graduate education, costs of programs vary from institution to institution and from discipline to discipline. These variations in themselves are not too meaningful; they need to be related to benefits.

On some critical points, there are different views revealed both in the literature and in costing practices: in particular, how to handle stipend and tuition costs of graduate students; how to handle sponsored research costs; what units to use for costing; when to use average costs; and when to use incremental costs. Certainly the relating of costs to benefits remains largely an unsolved problem. That much more needs to be done is an unimpeachable if uninspiring general conclusion.

Dean McCarthy and myself would appreciate any comments you may offer, especially since we may have, in effect, two reports. We would rather have one report or agreement on both reports. But if not, we feel we have to speak our piece.

Discussion

Dr. Crawford: Sitting here listening to you, I was reminded of a time when I was invited to give a lecture at the Naval Ordnance Test Station in Inyokern, a government installation, and was offered an honorarium. After I gave the lecture, they said, "Oh, yes, we've got some papers you need to sign." I duly signed one where I signed as vendor a bid against a requisition for one lecture to be delivered on such a date. The clerk in the receiving room at the delivery dock had duly signed another paper certifying that he had received one lecture in good condition, undamaged by shipment.

This is the effort in which you are engaged in trying to apply the art of costing to something to which that art cannot apply because of the quality difference. Lecturers differ in quality, and there are two points I want to make about this. First, to avoid invidious comparisons I will invoke the finest lecturer in chemistry I have ever heard, Peter Debye. Anyone buying a lecture for delivery to be signed for would do much better to buy a lecture from Debye than a lecture from Crawford. So there is a difference between lecturers. Second, the quality of a lecture, certainly from Crawford and I will assume Debye, is unpredictable. I have given some very fine, superb lectures. I have also laid some eggs that were pretty bad, and I do not know any method of making absolutely sure in advance that I will give a good lecture instead of a bust.

I think this is essentially the dimension of your difficulty, and the only other thing I can add is a sentiment of gratitude to you and Dr. McCarthy and our other friends who are valiantly in this fight because this cost analysis is something that has to be done, however badly. And I hope that you will maintain the position of drawing attention in your report and retain a very strong voice pointing out that quality is the factor that makes all the difference between a worthwhile graduate program and one that is not and that this is not something that is amenable in very good fashion to these practices.

I would hope with regard to including the really essential elements of a graduate program, such as research, that you stand fast in the position that you have outlined.

Voice: I wonder if you have not in research covered two extremes and if there might be a middle position in that you are talking about a graduate program. I think your definition of including all research is certainly valid. On the other hand, if I might also talk about the cost of graduate education which might be somewhat different in that it has focused indeed on the product of the training of a student as compared to producing new knowledge.

My question is really this: Have you looked at the possibility of trying to determine – and I realize how difficult it is – what a reasonable amount of activity would be to train a student in a specific discipline? There is then the clear understanding that other research, which is still very essential and which should be carried out in the university, does not have as its purpose essentially the training of a student but the production of knowledge.

Dr. Deener: We have thought about that and I just do not think we can do it. What you are saying is that there is an average amount of chair time, if you look at it very carefully, and when the student puts in his chair time then he gets a degree; I think this is wrong. When I have a person doing a doctoral dissertation and he has a problem, he resolves it or he does not. It may take him years or it may take him one year. I would bitterly oppose the just "chair time" approach to the degree.

On the other hand, we have recognized that there may be research carried on at a university that may not be part of the graduate program and this is made clear. Where there is an institute or a center where research is not carried on by regular faculty or does not involve graduate students, then we clearly recognize that this is not part of the graduate program, and that I think is fair enough.

But I think that the best judge, really, of the time necessary for lecturing and for research is the faculty that conducts a program and then in the last analysis, the final judge will be those who pay for it. Now if you do not want to pay for it, that is your choice. It is also that institution's choice to continue to offer it. That is the position I am taking.

Voice: I was not talking about differences in individual students. Obviously there are great variations. But considering the number of students we have, we have some statistical means which can be used as guidance, recognizing that some will take less, some will take more. I think this was really the point here.

If you take the attitude that whatever research program one wants to have is part of education, then it seems to me you have an open-ended situation where the research program could grow tenfold because of the desire and the willingness of the faculty to produce more knowledge, even though the student body might actually be decreasing, and you would still count it against graduate education.

Deener: Here again you are getting into unit costs. If this apparatus takes $500,000 a year and it turns out new knowledge plus new students, what difference does it make if one year it is 5 students and one year it is 10. It is the package that is important. You do not throw away a Cadillac simply because you drive it 10 miles one year and 1,000 the next. You do not throw it away because you drive it only 10 that one year.

I would not worry about your saying there is an average and you expect differences, but computers and accountants do not recognize these differences. They just come out with the averages all the time. And I think we can recognize our averages so long as it is the academic people who have the authority to work with those differences and say what they mean within the institution. This was at the heart of the problem yesterday when a group of graduate deans realized there were problems and yet shrank from proposing any solutions other than one which at present they cannot command.

Again, I think you can get a statistical average, but what would it be an average of? Supposing you did run a statistical average of how much time it would take to produce 20 physicists. They might have been the lousiest 20 physicists ever produced. On the other hand, to produce the best physicist the amount of research may be almost nothing because he is so good that he solves problems just like that. As a matter of fact in our math department, the better the student, the lower the cost.

Voice: I agree wholeheartedly with you that a university has to look at the benefits and decide whether the program is worth paying for and determine how it is going to be paid for. One of the big problems that comes about is identifying benefits, and in talking to cost people in our institution, the hangup that I, as a graduate dean, have with them is determining how we get at the benefits.

We took the approach of not talking about how long it is going to take but looking at the average time that a Ph.D. student is in our operation. We felt that this would be between four and five years and so we set up a model on this basis, looking at the actual cost by cost levels — and these are all physical sciences or engineering students. Then we recognized that there was a certain output that this student had that we could not put a dollar value on, but we could put a dollar value on what it would cost for this output if we had other professional people at the same educational level doing the work.

At our stage of developmen: no one would argue that we need to do some research and we need to do some teaching, but if one does this, you will find that in four years it would require about $50,000 to provide the services that he provides in terms of the teaching assistant or research assistant for developing the material that comes out of this dissertation.

I would not want to try to justify the worthwhileness of this, but I will say that I spent several years in a government laboratory at Livermore and that the government at least is paying at these kinds of rates for the same kind of information that is coming out, so at least it has some national value.

If you do this and then start comparing that to institutional costs, and these will vary, it turns out that their institutional costs would predict that this has cost us about $30,000, so in our opinion there is a benefit in excess of what it is actually costing us to get the work done, again providing we were using a technician at $12,000 per year, and this is what you have to pay at the present rate for a good technician. These kinds of things, it seems to me, we can model, we can mock up and at least talk about an average or a model type of benefit. I think a good deal more work needs to be done in this kind of direction.

I might also throw in one other thing here, that is that at our institution virtually all of the research assistants are paid for by grants and contracts, so that of the $29,000 for producing a Ph.D., approximately half comes from grant and contract money. In other words, it is federal money rather than state money. So for state benefit, I at least argue strongly that for about $12,000-15,000, we have produced a Ph.D. who produces for us an equivalent value of somewhere in the neighborhood of $50,000.

Deener: This has been implicit in our approach to what the cost of the graduate program is. It is going to be essential for individual institutions to do just about what you have done.

I did not emphasize it here but we do bring in this notion of net cost to the institution. You have this graduate program, however it is conceived, that costs so many dollars. If you can get an offset from grants and contracts, if you can get students to pay tuition, then the net that that university has to look for is this smaller amount. If you do not get offsets, the net is much bigger. Each institution will have a different set of circumstances.

We are making the recommendation that there should be further research to develop various models based upon empirical characteristics of certain types of programs. This, we believe, would be useful. But the data that we have did not permit us to do that.

Voice: We have purposely left out capital costs in these cost evaluations because we assume again that what we are doing is worth doing and that it would have to be done one way or the other. This means again, that on a four-year model, we are talking about $30,000 or a little over $7,000 per year, but if indeed you put in capital costs, it might very well go up to the $11,000 that you mentioned for physics.

Deener: Let me just take that figure because I think this was net direct instructional cost. This was the only common thing we could come to, really, from the studies that we had. In most of these studies, if the research were sponsored, it was not included in direct instruction, so that our net did not include sponsored research. You would have to reaverage these ranges then separately by adding budgeted fellowships and teaching assistantships and any sponsored research if you figured it was part of the program. Then you would have to use the overhead factor. We found in these studies that the overhead factor varied from 1.2 to 2.3, depending upon the institution involved. And this did not include capital costs in the sense I think you are using them. Incidentally, that is one matter we are pointing out, that someone ought to start paying some attention to the capital costs involved here. There is an assumption that you get a building and it is there, and there is no cost to it except maintenance.

What it does point up I think is that graduate education is costly. And again, a research doctorate is probably the most expensive, costly type of educational process there is. You've put your finger on an important factor. But I do not like the idea of getting into a situation where you come up with an average cost and then somebody comes in and says, "I ought to get the Cadillac but I only want to pay a Ford price."

Dr. Fraenkel: You mentioned the relationship of the graduate program of research to society, perhaps of the institution in general. But I wonder if we can look into that a little further. I can imagine at one extreme a large state college that had no graduate programs and then started giving some. For some time they would presumably have a very small influence on that institution. Compare that to one in New York City like Rockefeller University, which was originally a research institute and now gives a small number of Ph.D.s primarily in the biological sciences. Obviously, there is a tremendous difference between these two model institutions.

But how much do the research and the graduate education that goes with it and the faculty that goes with it relate to many, many other things in the institution? First, the undergraduate side: What quality of undergraduate education do you have if you have some of the graduate education and research going along with it? Also on the professional side, what quality of education do you have if you, for example, look at engineering just as an undergraduate program and maybe a small graduate program? If you happen to be in an institution which also has a very good research-oriented physics department or chemistry department or mathematics department, it will make a big difference in terms of the level of quality of engineering education. A business school in a university with a good economics department at least in principle ought to be a better business school.

How does one relate the costs that in a sense we think of as related to a particular graduate student getting a Ph.D., but how do we look at the costs which benefit all of the rest of the institution in a very, very major way?

Deener: This is one area that the cost literature does not get into, particularly the value to undergraduate education of the graduate faculty and graduate program. We have already mentioned that it is awfully difficult to measure the results of research. In fact, I feel that the unit probably is not the graduate program; it is the disciplinary program. If your program is teaching freshmen and postdoctorates, then that is the unit that you have to talk about. It is awfully difficult when you start costing various levels and start making decisions based upon it. Then really the fur starts to fly.

People do want to measure what it means to the undergraduate to have a graduate department. I think we all will accept that in most cases a good cadre of graduate professors enhances undergraduate instruction. How do you measure it? It has been assumed that you can cut the line between undergraduate and graduate costs. I do not think you can. I do not think we have the analytical tools to do it, although it has been suggested that a faculty activity analysis may be used. The trouble is that you may preorder it by the kind of questions you ask. There is also the question whether it is better to let the faculty tell you what they are doing or let a department chairman do it. But this is on the assumption that you have to make these distinctions in order to make academic decisions. I am not too sure that is a valid position.

A program in English at Tulane is not freshman or sophomore English distinct from anything else. It is not Shakespeare; it is not the Ph.D. program. The same 20 or so professors are doing all of the program, from freshmen to Ph.D.s. I would argue that the unit is the disciplinary program embracing all levels that the institution proposes to offer, and that the gross costs of the total program is what you have to live with. Then if you make these unit analyses, fine. I think it is a valid and perhaps necessary way to analyze your institution. But this does not mean that the averages obtained are applicable any place else. It may be possible to build models. Maybe this is what we need to do: devise models and let institutions decide which model they want to create or recreate on their own campus.

Voice: Do you have a method or do you suggest a method for separating the appropriate cost of the graduate element of the program in the case of programs that interface or crossover with separately appropriate programs such as agricultural experiment studies?

Deener: I do not. One of the difficulties is that when you get down to the technical ways of how to do this, then you move into a realm that I know nothing about which is accounting and computers and the like. And the people who know about these things may not understand the premises from which I as a dean want to operate. Cost accounting in any detailed sense involves obtaining considerable campus consensus if it is going to be accepted and believed. To obtain this consensus, you will likely have to drag your cost accounting scheme all over campus for discussion, review, comments, etc. This will take time and generate some pretty harsh feelings. Now if you have a good business officer, this can be worked out. Incidentally, I appreciate why the business officers do not want some of these things said in this report. From their point of view, they may be put in a position of being accused of making academic decisions which they really do not want to – and did not – make.

But I do not have the answer and the literature has not reflected or told us that there is any best way of doing these things. What it does do is focus on the units. This is an area that we have to settle. It does suggest there are wide variations; it does suggest it is an awfully complex thing. I think what we are trying to say is that we have to do some thinking about what we conceive as a unit. Then, as for the units that are being used, credit hours or degrees or this or that, make sure that they are adding up to what we think is the most meaningful unit.

The cooperative program is just pretty hard. You have done departmental analyses, haven't you? You get all sorts of heat on whether you should do it this way or do it that way. And if you do it both ways, the net result would be so small, in many instances, that you could have used either for the purposes of gross decision making.

Dr. Boddy: It seems to me there are more problems with the use of such data in a very real sense than there are with the data themselves. You have already illustrated a very complicated and difficult problem with cost allocation and even the purposes for which the allocation should or could be usefully made.

One thing you kept referring to is the fact that no matter how you look at the numbers, graduate education is expensive, but if you look at undergraduate costs, you find the same tremendous variation by program. And it was quite clear in the case of some of the detailed studies we made that we have a large number of undergraduate programs for the bachelor's degree that are more expensive than many of our Ph.D. programs.

Even though the ranges are wide they overlap so much that if the suggestion is that graduate education is so expensive that the state legislatures may become enamoured with cutting down on graduate education, you ought to say that they also should cut down on these programs, too, at the undergraduate level.

The second problem is that a discussion of these costs raises a problem that has to be faced: the extent to which any differential costs are the result of differential benefits to the student, which is again something that institutions look at in horror because fundamentally we do not want student allocations to be made on the basis of the cost of the program. We would like to have equal access to the man who wants to take a Ph.D. in Greek and to the man who wants to take a Ph.D., let us say, in soil science or something of that sort, which, by the way, is one of our more expensive programs. So it seems to me that we are beginning to raise a lot of questions that have to be looked at in addition to the quality and meaning of the numbers themselves when we start exploring this whole area.

Deener: You are so right. If any of you want to do a little exercise, take the average salary information that is produced by the AAUP and compare faculty salaries at a "good" undergraduate institution with those of a "good" graduate institution. You'll discover that quality in faculty is costly, regardless of whether it is graduate or undergraduate. And by "quality" I mean a faculty member who gets national recognition or regional recognition through publications, etc., or who gets a good reputation as a teacher, which means he is probably putting a lot more personal time in with students. And the tutorial method, which is in essence a good part of the graduate method, when it is used at the undergraduate level, costs about the same.

Voice: One interesting exercise in this direction is to work with some figures that are kind of hard to falsify. Take state appropriations for universities and divide into them the number of students that they claim, and you will find that the variation is quite surprising. It runs, for a reasonable number of schools, somewhere from $1,000 per head up to $3,000 per head. There are some secondary schools in this country that run over $1,000 and then if you take that information and compare it with the Fawcett Report as far as quality of the school, you will find that there is no real comparison and that the probabilities are that the better schools on that kind of a basis are the ones that are somewhere in between. I will not mention names but it turns out that around $2,000 is rather common for the better universities that are listed on the Fawcett Report, so quality and dollars are not necessarily close together. To go one step further, though, and start looking at the federal dollars that have been given to these universities, you will find that the federal dollars correspond rather closely to the Fawcett Report, but they again have very little relationship to what the state gives as far as dollars are concerned.

Deener: On this quality of institutions, Tulane has a so-called Newcomb Nursery School which enrolls a very selected group of 20 students at the age of four for a two-year curriculum. The tuition for that four-year-old is greater than that for the Ph.D. candidate at a neighboring institution in New Orleans, and I am sure the quality of education is not the same.

Voice: I would like to harken back a moment to the discussion yesterday afternoon and the kind of institution that Dean Lively was talking about. If I understood you correctly you said that if student output was to be figured, you strongly preferred to use the by-degree rather than the by-credit-hour method of figuring it. This might provide some difficulty for those institutions that Dean Lively had in mind and also some other people in this room who have assumed that part of the function of a graduate school is to deal with the "nondream" student and in particular to deal with the part-time or nondegree student. He cannot ever be figured in terms of degrees granted. What do you do? This I think we agreed was a legitimate function of a graduate school. How would you suggest that those of us with a large lump sum at the end of the regent's report and other students get some credit with our business offices?

Deener: I hope I was not misunderstood. Apparently I was. What I said was that the per-credit-hour unit is the one most commonly used. In addition to that I think you have to use the number of degrees awarded. Now if you are in a nondegree program, it is simply a different kind of program and I think then you can use the credit hours with complete satisfaction. What I am saying is that if it is a degree program the level of credits taught does not add up to degrees and the degree holder presumably has a greater value to society than the nondegree holder.

I say "presumably." Maybe he does not. There is a time lag. If you are going to have five years or seven years for a master's, then you will not get degrees as quickly, but once you start getting degrees, then I think this is a measure that Dean Lively would want to have. If it is a law degree program – and we have some at Tulane – then you use the other method. I am simply saying that the degree program credit hours are not the only unit. It is misleading in some respects.

Voice: In your wide range of unit costs per year, did you find any pattern of relationship between the amount of the cost and the number of students in the program?

Deener: Yes. Remember, it was said that we did discover that there was kind of a decreasing cost with the number of students, and then it went up again. But we could not really say much about where this level of effectiveness is. We did find it; we just cannot put numbers on it. There is not enough study. The trend is there. If you have nine studies that show something and yet you do not have enough to continue to push to see, it is very frustrating.

One of the things that happened of course is that we did not get studies that we know are in existence. For various reasons, people did not want to send them. One study, the best we had, was sent to us with the admonition, "You cannot divulge where you got it." In a year from now you might have 100 studies, of which 50 might be comparable, and instead of 9 programs you might have comparable data that you could massage statistically for 30 or 40. Then you might be able to do some of the things which Dr. Crawford would like to see us do. We just do not want to do them with the data that we have. We just do not feel that it is right to try; it is too shakey.

Boddy: I have some numbers that may explain the problem of trying to assess the costs related to quality. I have the data on all the major economics departments in the country. The pattern is quite clear. Salary levels in the highest-rated departments are significantly higher than in the rest of them, but among the rest of them, there is very little difference. So we have essentially a sort of two category with the significant difference. Broadly speaking, across the rest of the large departments, salary levels vary a good deal but they do not show any significant variations between quality classifications. Also, there is a very distinct difference between the output per faculty member of Ph.D.s. There is a significantly larger output of Ph.D.s per year per faculty member in the higher quality departments. When you combine these two things you can see why it is that the average cost per student is not terribly related to the salary levels or to the quality level.

Fifth Plenary Session: Evaluation of Graduate Programs

Friday, December 3, 1971, 10:40 a.m.

Presiding: Charles T. Lester, *Emory University*
Robert H. Baker, *Northwestern University*
Francis M. Boddy, *University of Minnesota*
John J. Turin, *University of Toledo*

Rank-Ordering Universities by Evaluation of Departmental Graduate Offerings

Robert H. Baker

It has been suggested that two recent attempts to assess the quality of graduate offerings in the departments of American universities have fallen somewhat short of absolute precision, and far short of satisfying the great masses of professors whose earnest efforts are greatly demeaned by rank orderings that suggest they are insignificant. Despite the fact that the instruments of the assays were clearly described to be opinion polls, implying that limitations of judgment and modifications by emotions could not be avoided, there is no denying that great masses of people have been induced to believe that some eternal pecking order of university prestige has just been revealed.

In retrospect, it should be remembered that we have now witnessed three attempts to use this method for judging departmental strengths – with slight refinements added to each of the last two. The results of the first study were not published, and I recall stating strong opposition to publication of each of the others, on the grounds that such comparisons were capricious and counterproductive.

Both Marlowe and Shakespeare had biting comments about such comparisons. Marlowe said they were "odious," and the punster changed the word to "odorous" – anticipating by 400 years the epithet "they stink." Shakespeare's context was about a man judging his comparative honesty, which is not far from our concern: institutional honesty in graduate effort.

Honest attempts to devise reliable methods for the measurement of the quality or quantity of materials or concepts deserve our eternal praise, but the use of unreliable methods for the assessment of the goodness of ill-defined concepts is contemptible. Yet there is some human frailty that disposes toward the latter. Probably far more human effort has been expended on arguments about the number of angels that could be placed on the head of a pin than in counting the number of teeth in a horse's mouth.

This disposition toward assessment of prestige, or pecking order, whether impressed upon the genetic material by some heavenly stamp or etched there by the hard forces of nature over eons of time is clearly visible in man and in those animals he calls lower. It may be useful in enforcing the territorial imperative, in deciding who shall wear the crown rather than the sackcloth, but it is ill used in speculating on how far to the right of the archangel one's goodness will eventually place him or how far below Harvard his university currently stands.

It is significant that the categories of prestige established by the Cartter Report and by the Roose-Andersen Report have now been shown by Elton and Rodgers (*Science*, 1971, **174**, p. 565) to be closely correlated to a group of factors that in total may be described as measures of the magnitude of operation of the graduate department. This revelation gives no special comfort to those who still hope that high-quality doctoral work can be conducted in a graduate department with considerably less than 40 faculty members and 200 students.

My stand against prestige assignments does not imply that departmental quality is unworthy of attention. The attention, though, should be given by the administrators of the program. Any graduate dean worthy of his title is constantly aware of the faculty strength, quality of students, adequacy of facilities, and excellence of performance of his various departments. It can be a help to him to have outside consultants help him to be objective in his evaluations, but it cannot be a help to have imposed upon these efforts the results of a popularity poll. Not only is it true that the poll may be misunderstood to mean that some well-meaning educators have failed, but that others have succeeded well beyond their just desserts through the accident that they operate on a larger scale.

All these objections, however, are small in comparison to the critical one that higher education cannot benefit from the publication of such prestige studies. Like the gambler's paradox, the value of winning a higher position is relatively less than the cost of losing to a lower one. To put it another way, those institutions at the top of the various categories gain little in their ability to attract good faculty, students, or money because the academic community has already recognized them as attractive, but those lower in the scale are weakened in their efforts because one more piece of evidence, however tenable it is, has cited them as unattractive. One wonders, for example, if Northwestern University's Department of Astronomy would not have been better served by Roose and Andersen if it had been relegated to the unknown rather than to have been put in readable print as twenty-third and definitely last.

The accreditation of colleges and universities by summation of values assigned to departmental strengths is typically American, and somewhat accidental. Very soon after the establishment of the Association of American

Universities, both the Dutch government and the Faculty of Philosophy of the University of Berlin announced that baccalaureates from AAU institutions would be qualified for matriculation. Oddly enough, universities that had banded together to promote their doctoral work had been externally validated for undergraduate effort. Membership in AAU was not just a matter of prestige in doctoral work because their baccalaureates – and only theirs – were, in effect, given relief from a whole year's work toward the German Ph.D. Though the practice rankled other American institutions, the matter rested for eight years, until 1913.

At this time, the association established a committee to join with the Carnegie Corporation in producing a list of other institutions whose baccalaureates should not only be qualified for AAU graduate schools, but should also enjoy matriculation in Germany. The first list of 119 included the 21 AAU universities, 32 other universities, and 66 colleges. By 1949 the list had grown to include about 350 of the approximately 1,800 collegiate institutions, each addition being made after thorough study and evaluation by a voluntary Committee on Classification, which was usually followed by considerable debate by the graduate deans and presidents at the annual conference. There is no question that the work of this committee was honestly, earnestly, and competently done, but it came in time to be an onerous and uncertain task. It was onerous in part because the conscience of the association was never entirely clear on its own membership requirements. It was uncertain, as judged by the fact that at least two reports showed little difference in the success of students from the approved and nonapproved institutions, and by the fact that the list of baccalaureate origins of American Ph.D.s had become, by 1950, three times as long as the association's approved list some five years earlier.

Edgar Allen Poe observed that while a point may be debated frequently because it is obscure, it is often obscure because it is discussed so much. After 35 years, the deans and presidents of AAU tired of perpetrating the myth that they could or should continue such attempts at accreditation and abandoned the business. Like families in the home of the hanged, they have assiduously avoided mention of this rope ever since.

I see no evidence during these 20 years of silence that the lack of such accreditation has been deleterious to our efforts. I see considerable evidence that the efforts of the American Council on Education have served us poorly. And I suggest that the Council of Graduate Schools let the matter rest in peace.

The Cartter and Roose-Andersen Reports: Current Effects and Future Implications

Francis M. Boddy

I would like to discuss what I think have been some of the effects of the publication of the Cartter and the Roose-Andersen Reports and then turn to what I believe is the real problem: Having been published, what is the problem that we now face with respect to where do we go from here? First I will summarize what the report did, not necessarily what it said it did, but what it in fact did, and in the process of doing that, I will suggest some of the problems that arise in considering where we go from here.

The reports both as of 1964 and as of 1969 tried to reveal the following "facts."

First, they reported the departmental faculties' and programs' reputations for quality – not quality but reputation for quality – among fellow academics in the academic field in the same discipline. These facts, if you narrowly define them that way, were reliably ascertained; they were indexed in an appropriate fashion; and they were published. All three things are important. The process was reliable in the sense that all sorts of cross-checks of the various groups, sample size, and external kinds of judgments against which these could be measured indicated that this is in fact the reputation for quality as surveyed by that questionnaire.

The indexing was arbitrary, but again, if you wish to apply any kind of ranking or translation into numbers, some arbitrary classification has to be made. You may remember that the people responding were asked to say whether or not the faculty was distinguished, strong, good, adequate, at least adequate, or less than adequate; and the quality of the programs had similar kinds of adjectives attached to them. These were then just indexed the way you do places in a footrace or something of that sort, the highest category was ranked 5, the next 4, and so on, and averaged out.

And then they were published. The second publication tried somewhat to minimize or at least reduce the impact of carrying the things out to two significant figures to the right of the decimal point by reducing it to one, and Roose-Andersen also, as you may recall, did not make the clear distinction or publish the scores for the rankings in the top two categories, so they somewhat reduced the apparent decimal point accuracy of the numbers that they derived. But you have to remember these numbers are arbitrary. The real thing that was said was, "Do you think this is a distinguished department as against the strong," and that is a somewhat unmeasurable kind of thing for a person to answer in a questionnaire.

What are some of the handicaps or faults of such a study? The second fact that you have to remember is that these studies covered only Ph.D. programs, Ph.D.-producing departments, and they were restricted in the Cartter Report to 30 fields and in the Roose-Andersen Report to 36. In my own university, the number of Ph.D.s in the rated programs, that is, in the 36 fields, amounted to only something a little more than one-half of the total Ph.D.s granted by the university, and I suspect similar kinds of percentages with a good deal of range would be typical.

Third, the reputations of the faculty and of the program were judged by the respondents in the implicit or explicit context of Ph.D. programs, and therefore a program that emphasized its master's program rather than its Ph.D. program was being judged by completely inappropriate standards, or may have been judged by completely inappropriate standards, depending again upon what was in the minds of the respondents to these questionnaires.

Fourth, and I think far more important, in spite of the constraints that were imposed on the applications of the study by the limited number of fields and by the narrow base of judgments, that is, the judgment as Ph.D. programs and as a Ph.D. teaching faculty, they became applied to institutions. In other words, they were immediately translated, sometimes very much outside the context of the report itself, but some in the context of the report itself, into institutional ratings. There was an implicit, and in a couple of cases explicit, statement that you could somehow combine these to rate the institution as a whole and not just the separate program fields.

What were some of the outcomes of the publication of these studies? I think it had a very strong plus benefit. You will have to decide how strong in your own minds, but it certainly did provide substantial information, narrowly defined – it has to be kept in mind that it was narrowly defined, but nevertheless, accurate, reliable, and for its time at least and in its time probably very useful to decision makers.

What decision makers was it aimed at, and what decision makers in fact may have started to use it? One of its audiences was the prospective graduate student. Prospective graduate students always inquire, if they are sensible, from their major advisers in their undergraduate institutions or from friends who have gone on to graduate school or a variety of other sources, What are the appropriate kinds of institutions for me? And in deciding on the appropriate institution, one of the things considered is, What is the quality of the institution, and what is the quality of competition that I will face there? It is a combination, in other words, of the quality of the students that come and the quality of the faculty and their standards there.

I have had a number of people who were looking for jobs come into my office and ask to look at the report. In the times when there was more mobility than currently, it was even more useful. Since it seemed to be something they took into account, I can only judge that it was useful to them. By giving what I consider to be at least valuable and reliable information in definite categorical and rank form, it has tended to overshadow or depreciate the value and the need for other information of other dimensions of graduate programs that should also be a part of the decision-making process of all of the various types of individuals. The danger, in other words, is using something because it is measureable and available, and neglecting other things that may be far more important in particular cases because they are unmeasurable and/or unreported.

Another thing that has happened is that it has raised the question as to does or should "the reputation in the academic discipline," even if it is reliably and accurately established, count very heavily in rational decision making against these other dimensions. Even if you recognize that it is just one thing, you still have to say now how much you weight this factor in making the decision as a graduate student, as a prospective faculty member, as a graduate dean, or whoever. And these questions certainly are not easily answered.

The third thing it has done is to intensify the competitive drive of many faculties and administrators by making public to their publics their reputational standing. Dr. Baker has already spoken about some of the bad effects of this. The only thing I would emphasize is that I think it has increased the competitive pressure, however that may work out.

And probably, at least in some cases, it has helped administrators to persuade their public and more particularly, perhaps, the source of their funding, to give them increased resources to enhance their standing. But it is like the Big Ten in football; no matter how good the total quality of the teams is, we have one team that goes to the Rose Bowl and typically some, sometimes Minnesota, that line up fairly well down in the standing. They all may improve but the relative standings are what are registered.

It probably also led to an unfairly low assessment of some departmental, institutional, and program quality, and the publication of this has probably led to an unfair assessment by their public of many graduate departments and graduate institutions because, first of all, there is no unambiguous definition of what the differences in rankings really amount to. Are these slight or major differences? Is the difference between the ranking of astronomy as 23 at Northwestern that Dr. Baker referred to a tremendous difference, or is it just a slight difference? The numbers do not tell you because the numbers were arbitrary, and so the whole question of determining whether or not difference in ranking has what might be called a cardinal significance as well as an ordinal significance is a problem that has led to the fact that people rated rather low may be very good indeed and still be low if the others are only slightly better.

The assessment of success must be judged in terms of the aims and the missions of that particular department and that particular institution, and it is not necessarily true that every institution or even every major graduate institution ought to aim, in this kind of competition, toward objectives and missions as other institutions. There is a different clientele; there is a different perceived public; there is a different feeling on the part of their faculties and administration, and these things of course are not taken into account.

Very many high-quality and very successful programs for Ph.D.s, when judged in terms of their own specific goals and missions, may be very strong indeed but they may not be judged or ranked very high in terms of general Ph.D. programs across the country. The broad-spectrum departments with the large staff and the large number of graduate students obviously are more publicly visible, better known, and better known for a good reputation than equally good people in a small department that does not come out so well. The handicap then is that the more specialized, smaller departments that may be doing a superb job in their particular area of concentration are likely to be down rated in such studies. Small departments generally, other things being equal, come under this heading.

On balance, the effect of the publications of these studies has been a healthy one for graduate education, but it is the responsibility of the graduate community to educate their publics both as to the value and usefulness of the results and their limited appropriate application and to the dangers of bad decisions if these results are used for decisions where their specific information content is inappropriate or where it leads to neglect or to the overshadowing of other and perhaps much more important factors just because they are not measurable, or at least so publicly measured.

In any case, these studies were done and they were published and so now we have to look to the future. The question then follows that if the studies are not replicated or reproduced in some other form at some appropriate interval, either *en bloc*, all at once, as was done, or *seriatum*, taking some fields each year as was one of the suggestions of our committee, what would be the effect of this then if they are not replicated or reproduced?

First of all, the facts as published today can wither away with the passing of time. For a fairly long time beyond the 1969 rating, or both the 1966 and 1969 ratings, they will dominate the information scene because they are there, they are published, they are available, they are widely publicized, and people will in fact continue to pay a good deal of attention to them. Are we willing, therefore, not to replicate these studies and live with the aging and progressive unreliability of the ratings for the period in which decisions will still be based on them, or are these costs too high to bear; the dangers of having decisions being made on the basis of information that is becoming more and more out of date, unreliable, and less appropriate, even within the narrow context of its meaning? Are these costs of living with this too high and, therefore, is some periodic updating, if we can devise better ways, overall the best strategy? I think the question is not so much what are the criticisms of the original studies, what good or bad effects they may have, but given the fact that they are there, what is the best strategy for the graduate community?

My own feeling is that if you took a sort of a public poll vote on the part of our publics, they would say these things should be done, very much so; the accountability side. Accountability is always tricky: if you use the wrong instruments in accounting, if you are not sure what you are accounting for, or if the people who receive the results do not understand it. But I think the drive for accountability is sufficient to suggest that the public will expect this to happen, or at least our publics will expect this to happen, so I think this has to be weighted in, too. I am not suggesting that I know the answer as to the best strategy but I do think it raises a very serious question.

The Role of the Council of Graduate Schools in Evaluating Graduate Programs

John J. Turin

Possibly I have been invited to join my more distinguished colleagues because I represent an emerging, urban-centered graduate institution, not because it is a new school since it is 100 years old, but because our record as a graduate school of distinction has yet to be made. Or perhaps because the problem of evaluation is really a tired one without an easy answer, and all who have wrestled with it are happy to welcome any willing, outspoken neophyte to the fray.

I have been asked to address myself to those questions that pertain to the role the Council of Graduate Schools should play in the evaluation of graduate programs. Should the council take a formal part in the evaluation of graduate programs? If the evaluation role is avoided, then what, if any, alternative actions are possible or desirable? A meaningful discussion of these questions requires a clear understanding of the purposes that such an evaluation is intended to serve, for, clearly, evaluation without objectives would have little meaning.

To refresh your memory, the Cartter Report, dated 1966, indicated in its preface:

> By whatever measuring rod one chooses, the expansion of graduate education has been and continues to be dramatic, matched only by the rapidly expanding demand for teachers, researchers, and qualified specialists in private industry, government, and the professions who have attained the highest educational levels. If, as Whitehead once noted, the future indeed lies with the nation which values and fosters education at the highest creative levels, this is reason enough for a study attempting to assess the strengths of present day American graduate schools.

The preface of the Roose-Andersen rating five years later stated:

> A fundamental purpose is to furnish prospective graduate students with information on faculties and programs. The study seems to us warranted if at the least it enables prospective consumers of graduate education to make more intelligent and informed choices of programs and institutions. Beyond this function, however, we hope the ratings will assist academic administrators in making judgments about the allocation of resources and support for graduate programs.
>
> Further, in this time of increased concern over the accountability of higher education, public authorities and policy makers need and are clamoring for measures to help them determine the successes or shortcomings of current policies and to assist them in planning for higher education.

Perhaps these are in themselves worthwhile goals. However, there is doubt in my mind as to whether these same goals should serve as the evaluation objectives to be espoused by the Council of Graduate Schools. I choose to debate this question. If one is to attach meaning at all to the major theme of the recent Carnegie Commission Report, "New Students and New Places," then we must concede that higher education in the United States will undergo great changes. I'm quoting from that report:

> Higher education in the United States until about 1940 was largely elite; from '40 to '70, we moved to mass education; and from '70 to 2000, we will move to universal access higher education, opening it to more elements of society than ever before.

These changes will have serious effects on graduate education. Many of us believe that the solution of the complex problems of the postindustrial era will require new understandings, new technologies, new techniques, more education, and the sincere desire to effect plans and procedures that will more equitably distribute the bounties of our civilization to a larger fraction of our population.

Without doubt, the most-pressing requirement for opportunities for upward mobility is in that segment of our population where great change is mandatory. Certainly our experience indicates that as the complexity of our civilization increases, a greater segment of our population will continue to seek that education at higher levels which is essential to provide them with the opportunities for upward mobility.

The prestigious universities have developed as discipline-oriented institutions. Yet we are faced in the immediate future with considerations that lead to new approaches to the solution of problems that cannot be identified solely within a given discipline. The ingenuity with which these problems are attacked may well determine the vitality of an institution. The near future will see controversy and change in graduate education, but most probably traditions of the past will not be discarded. They will be extended and enlarged to meet the problems of the future.

Searching for criteria that can best be used for the measurement of scholarly work, Smith and Fiedler, in "The Measurements of Scholarly Work: A Critical Review of the Literature," recently analyzed and tried to explain what they considered to be "the least contaminated" prestige factors appearing in such measurements. Clearly they have shown that simple measures attempt to characterize high quality are amorphous in nature. Now while I find the Cartter and Roose-Andersen Reports well done and agree with the remarks made by Dean Boddy in Florida a year ago that these reports "measure by the best techniques available to us" the reputations of the departments involved, I must question whether they really serve any purpose beyond naming those few institutions grouped among the best 10 or so institutions.

Perhaps we could agree that to place universities in a "quality" order when the list contains several hundred universities is a questionable and even useless exercise. I am not convinced that the evaluation that the Council of Graduate Schools requires is a contest to decide who is best. I am sure we all believe that genuine evaluation is difficult and complicated. Perhaps we could agree that an important purpose of the Council of Graduate Schools should be to improve the quality of graduate education wherever it is found and to provide inspiration to attain the highest possible creative level. Clearly then, rather than a rating order, we may have to satisfy ourselves with recognition of those institutions judged adequate to give graduate work in specific disciplines. This recognition is a recognition of minimal capability, not maximum, and is the kind of recognition that is provided by accrediting institutions.

In this age of great change when we suffer from the funds crush, overproduction syndromes, approach to steady state situations, pruning problems, emphasis on relevance, emphasis on special considerations for minority and underprivileged groups, changing social patterns, and so forth, can we truly agree on a simple set of criteria for evaluating the usefulness of all of our institutions? I do not think so. Evaluation of programs and institutions is at best a sophisticated, time-consuming business, and I must share Dean Baker's doubts about what CGS could add to resolve a situation that can more readily be clarified by giving more detailed attention to the present accrediting institutions or to a national committee on accreditation of graduate schools.

These considerations lead me to suggest that the proper role for CGS is to encourage higher and better quality in graduate education; to produce criteria for judgment; to act to establish standards; to be catalysts for higher achievement; to clearly enunciate the problems of the short range and well as the long range; to help establish values for graduate education in a postindustrial society characterized by new problems, new societal objectives, and new politics; and above all, to recognize that these new directions and developments in our society cannot be served by old criteria for evaluation – evaluation that usually takes place in the image of the evaluators.

CGS might set guidelines for choosing evaluators, establish criteria for judgment in a rapidly changing situation serving continuously varying needs, and take into account the effect of national priorities and the influence of politics on the situation. I would argue that while it is proper for this council to establish rules and objectives for evaluation by chosen judges or accreditors, it has no business directly in evaluation procedures. Evaluation is not a contest to decide who is best. Its purpose must be to promote improved graduate education and to foster cooperation between competent groups. It must avoid actions that have the tendency to be devisive. CGS must clearly be willing to study how it can best serve the basic interests of its member institutions and the common welfare. The CGS should not castigate the less well developed graduate institutions. For the most part, they have been sanctioned by accreditors and more often than not serve a unique need and a definite purpose. The CGS should seek to devise ways to use all available local, state, and national resources to elevate those graduate programs in the newer and less well developed graduate institutions so that the new student body may be well served.

Are there then any alternatives for CGS than to engage in evaluation of graduate programs? It seems to me that if there are, they must lie in positive action, encouraging and providing the means for creating higher quality in graduate education wherever it occurs. If we grant this thesis, then perhaps we should turn our attention to local and statewide cooperation within disciplines at the graduate level. Perhaps we should encourage group committees in the exchange of scholars. If indeed graduate education is a national resource, should we not or could we not support more interuniversity exchange committees at the highest level of doctoral work?

Perhaps CGS could recognize that graduate programs must persist and have good reasons to continue in many new and developing institutions. Perhaps, even further, it is not unreasonable to suggest that in the final analysis, the student himself will be the effective evaluator and his contributions, as and when they can be measured, the ultimate judge of quality.

Discussion

Voice: I find myself in the interesting position of agreeing with all three speakers. I feel, with Dr. Boddy, that there is some relationship between the ACE ratings and the quality of scholarship. I agree with Dr. Baker that that is not of much use to us or to society. And I agree with Dr. Turin that we have to approach the evaluation of graduate programs with a different approach, a genuinely different approach. And I submit in recent times we, along with most of you, have been looking at the allocation of priorities in our institution and I sought to find some measure, some criteria, for the measurement of the value of graduate education in our institution with some parameters that were orthogonal to the quality of scholarship, which is what most of the discussion has been about in the ACE. Interestingly enough, it is not hard to find 27. It was indeed difficult to try to find a small number that were orthogonal to each other that were not so intertwined that the quality of scholarship was not a measure of that other thing.

For example, productivity in graduate education is fantastically strongly coupled to the quality of the department. A given young assistant professor, the same person coming fresh out of graduate school to a distinguished department, will find himself coauthor of 10 papers in a few years. If he goes to a medium school, he, himself, working just as hard, will have been far, far less productive. So that productivity is a function of quality, etc. But in seeking some orthogonal criteria—and that is the reason we had to throw out productivity—we also did not know how to measure it as an orthogonal criterion.

We eventually picked five and we are experimenting with them now, and you will be interested to know that I have come to the conclusion that the quality of the scholarship, while it represents the central thesis of the academic guild, is probably the least important of these five in the actual allocation of priorities in the university as it will emerge. Not that it is not important to any given unit, but in evaluating the unit it will be far less important.

Let me just read the others so as to make my point. They are centrality, societal demand, uniqueness of contribution, and the quality of life, the quality of leadership in the department. And what I mean here is that if we come to the conclusion that a department is highly central to the purposes of the university, then the quality of the department does not really tell us much about whether we are going to put more resources in or not. That is, the point being that if it is highly central and the quality is high, we may get by by continuing, but if it is highly central and the quality is low, we will have to put more money into that operation. In other words, the interesting feature about the priorities in the institution are that a low-quality department may call for more investment of resources than a high-quality department. On the other hand, if the quality is high and the centrality is low, we have a completely different set of judgment decisions. We may have to decide that the people in that department ought to be encouraged to get into a more central, more exciting, and more important field of activity.

It is interesting to note that when you get right down to the issues of what you do in graduate education, we shall have to seek to look at other things, the quality of life, the quality of leadership. If a department is truly on top, it is not as important to know that it is second or third or fourth in the country as to ask the question, Is the quality of leadership, the quality of life in the department, such that it will be in the top two, trhee, or four, 5 or 10 years from now?

If its quality of life is bad, then we are reducing the opportunity for our graduate students and all of us know, a department may have one class of distinction in terms of the prestige of its faculty but in which the quality of life for the graduate student just is not worth sending a man there. He can be deprived of an education in that process. Therefore, by looking at some of the other issues it seems to me we will get about the business of really making some interesting priority decisions and perhaps the discourse about graduate education and get away from this single parameter function.

Dr. Crawford: It strikes me that this particular discussion is very reminiscent of the previous discussion this morning, the one on graduate costs. There we learned from our speaker the graduate deans should help in that study as best they can, even at the present time, so I feel that we had better take part in seeing that the reputation is determined periodically and accurately.

I was on the advisory group that worked with Allen Cartter on the Cartter Reports. There was considerable discussion and debate as to whether the ACE should undertake this type of determination of reputation. All of the comments and all of the weaknesses were certainly foreseeable and foreseen. However, at that particular point in time, there was a very firm basis for being quite sure that in at least one government agency there was a little list that someone had drawn up quite on his own, because the agency personnel simply had to have some sort of a general working rank order of quality of graduate programs in institutions, just for their own guidance in their operation. That was drawn up by a well-meaning government bureaucrat, constructive operations in that field, and this should continue to be done. CGS should work to obtain information and to distribute it. An example, of course, is the recent survey on graduate enrollment and fellowship aids which we will have reported to us a little later on in this meeting.

Now one of the factors in looking at graduate education certainly is the reputation of the various departments. It is not the only factor, as our speakers have reminded us, but it is a factor. We may hope that through various studies—and perhaps CGS can help support them and carry on some of those studies—we may be able to ascertain other factors, maybe faculty salaries, maybe library holdings or something that should be looked at, and so on. Meanwhile, however, the reputation is a factor that will be used by the students, by faculty members, by government agencies and the like. And just as at the present time it seems wise for CGS to take part in the graduate cost enterprise rather than leave it to our well-meaning and deserving friends, the business officers, who will have to do something of this sort and would rather not do it alone *in absentia*, Dean McCarthy, that you cannot really estimate the costs of graduate education very well, yet CGS is engaged in this effort, knowing that it cannot be well done, hoping that better methods of arriving at some cost figures can be achieved through continued research on the particular factors that Dr. Deener reported to us.

When it comes to the matter of estimating or evaluating the quality of graduate programs I think we are in the same situation. The role of CGS should be and indeed is, as Dean Turin said, to help all the institutions, emerging, emerged, and even decadent, to improve the quality in graduate education for our present students and for those, as you rightly point out, will be coming to all of our institutions.

CGS does engage in this in a number of ways. There is the consultation service which, as we all know, is very used, very useful, and is something that renders a real service. CGS does have a group working with the accreditation bodies, working with the National Commission on Accreditation, and working with the regional accrediting associations to promote and develop more effective operations in that field.

I submit to you that until we can develop better instruments to help students choose institutions, to help faculty consider institutions, and to help federal agencies consider institutions and all these other purposes, that while we pursue as strongly and as urgently as we can the development of better instruments, it is better to have the reputation determined accurately by us and published; than to have under-the-counter rank listings available, even though they may not be widely distributed.

Voice, National Science Foundation: Dr. Crawford talked about ignorant bureaucrats at the agency, in talking about the National Science Foundation. Actually, the lists were drawn up on the basis of several criteria and they were never published. The purpose of the list, incidentally, was to have in our own minds some notion of how institutions racked up, because we have what we call the science development program, and we very, very fuzzily stated the ranking of the institutions.

To turn to a more serious note, let me say that this discussion is a very important one and I would second Bryce's remarks about this organization doing something about coming up with some sort of an evaluation. This science development program which I mentioned, for example, represents the investment of over a quarter of a billion dollars in approximately 100 institutions in this country, aimed at improving graduate education and research, the total enterprise of one or more departments. That whole activity is finished insofar as the National Science Foundation is concerned but those programs are in abeyance. Nevertheless, most of those grants are still going on and most of those institutions are still trying to improve themselves.

With an experiment like this it seemed to many of us that there ought to be a follow-up to determine the consequences of attempting to improve the quality. We frankly do not quite know how to do it. We would like some measurable indices, some way of doing it. We have used the Cartter and the Roose-Andersen Reports just to look at. I should say that there are some of the departments which have had grants for a sufficiently long time which have risen between the first report and the last one. Whether this is a consequence or whether it is simply because they got a grant or whatnot, I do not know.

But you people here are the graduate deans. It has been said here that you each know whether your departments are good, bad, or indifferent. You must have some way of judging. On the other hand, there has not been anything coming out that shows how you judge them. If ever the federal government or other agencies are to start again to try to improve graduate education, it is a very important consideration to show whether or not the mechanisms that have been used have resulted in some real improvement, and to do that somebody has to come up with some indices and you people ought to be the most expert in this area.

Dr. Rees: I am not as clear as Dr. Baker that I do not want this thing done, or as clear as others that I do want this done, but it seems to me that the most important thing that we must recognize is that we are not in the same situation as the graduate schools were when Allen Cartter began his evaluation.

Several people have pointed out that we have more than one dimension of quality which is essential. Yesterday we spent a whole session talking about innovation. One of this afternoon's sessions is going to be talking about interdisciplinary research, and the whole thrust of these evaluations based on reputation is to preserve the attitudes, the emphases, of classical excellence of the Ph.D.s of 30 years ago. In my own institution we have one excellent department that performs that way and I certainly do not wish to do anything at all that will change the thrust of its work. On the other hand, we have many departments who are also doing excellent work that incorporate innovation and the whole mechanism of the evaluations that have been performed tend to move away from evaluating innovation as excellent.

So I am feeling very much on the fence about whether we should do it or not. But if we do do it, let us recognize that there is more than one dimension of excellence, that we do not want every institution to try to imitate Harvard or Berkeley, that we want the institutions to recognize the needs of their own communities, and that society, and particularly the job market, needs us to give the kind of graduate education that is responsive to the needs of society and the progress of learning to move into interdisciplinary work, to let innovation play a role so that we are not using this device to make everybody try to be like everybody else.

Voice: I fully share the sorts of reservations that have been expressed this morning, but I would hope, with a number of the other speakers, that these could be turned into a constructive rather than a blocking record.

It does seem to me that the very vitality of this discussion argues that this organization does have a kind of sensitivity to the difficulties of carrying forward an evaluative process, and I would like to second or third the suggestion of those who would have us move ahead in a constructive way to try to say what additional devices should be used in terms of the instruments, whose opinions are to be consulted, what additional criteria we ought to have in view, what should be the patterns of access to the information, and what kind of proviso should we attach to it. This organization is one that is peculiarly equipped to offer constructive judgment in this area and I would like to add my voice to those who feel that instead of simply expressing our unhappiness with what has been done up to now, that we attempt to move ahead, to take into account some of the problems that are widely seen in this group, and to develop a more effective collection of information that could be of help to us and the other kinds of audiences that you have in view.

Sixth and Seventh Plenary Sessions: President's Report and Open Forum

Friday, December 3, 8:30 p.m.

Presiding: David R. Deener, *Chairman-Elect, Council of Graduate Schools*

President's Report

J. Boyd Page

A president's report has, both through tradition and custom, become obligatory. I am happy to continue the tradition, not through any feeling of compulsion but because there are developments which need to be brought to your attention and a few general observations which I should like to make.

You may recall that the theme of our meeting last year was "Reassessment." This was not only timely but prophetic. This characterizes probably better than any single word what most of us have been primarily concerned with throughout the year now coming to a close. Some might have chosen other words such as "retrenchment," "reaffirmation," "rejection," or even "despair" as best describing their own activity or mood; but "reassessment" is I believe the better choice. We have our problems, but some of them do not seem quite as overwhelming as they did. Graduate deans are of necessity resilient. The prevailing mood which has grown out of our self-examination is one of cautious optimism and determination to keep graduate education strong and quality high.

In many ways this has been a good year. It has not in any degree been an easy year and certainly not a good year by the standards of the mid-sixties. It has, however, been good in the sense that we are collectively in a better situation than even the most optimistic would have predicted a year ago. We see more clearly now the dimensions of the problems confronting us. Our critics are fewer and less vocal and the irrational responses to the extremely unfortunate phrase "the Ph.D. glut" are much less frequently voiced by the decision makers and those who are influential in molding public opinion. In the early months of this year, the prospects of restoration of any significant portion of the abandoned federal subvention seemed almost nil, and even continuance of what is still in effect appeared to be in jeopardy. The response some months ago of a highly placed official in the Administration that "we clearly have trained too many

Ph.D.'s, therefore, there is no justification to continue to support graduate education" is indicative. No discernible provision for support of graduate education could be found in the stated administration position on higher education. However, the Congress has included in both the Senate and the House bills, already passed, authorization for significant support of various elements of graduate education, through fellowships and traineeships, facilities grants, and institutional support based in part, in the Green bill, on graduate enrollments. The Senate bill is scheduled for further debate and possible amendment before it will go to the conference committee, but the sections which could be of such great significance to graduate education do not appear to be controversial. The prospects that authorization for extension or for consolidation and extension of support programs will be written into law seem good at this time. Obviously, the final bill has not yet been put together. It is important, therefore, that the conferees and each of your Senators and Representatives be kept fully aware of your feelings so that the essential authorizations will not be displaced or dropped.

It would take much more optimism than I could muster to assume that what we hope will be authorized will be funded in time to have significant impact for the generation of students now enrolled in our graduate schools. But without authorization there could be no funding. With it and with strong reinforcement from the graduate community, the sense of the Congress might prevail so that some funding can be restored.

To this extent at least we are in a much better situation than we might have been.

Because of the dramatic reversal of policy and the many other changes which have come upon us, we have been forced painfully and reluctantly to reassess our strengths and our excesses. I sense much less of a defensive attitude and a growing resurgence of a proper sense of pride in the capability that has been developed and in the certainty that society will still need our graduate schools and the products of what is clearly the finest system of postbaccalaureate education in the world.

This pride is essential because we clearly have a challenge — to be sure that our own shops are clean, to reconvert our constituencies, not just in Washington but most importantly at home, and to the conviction that the enterprise is alive and well, that if the many problems now facing society are to be solved we need more research not less, and that the future will still belong to the person of superior training and ability.

It appears that we may have rid ourselves finally of our lingering doubts and guilt for having overproduced. Let us recognize the true dimensions of the sixties. A clear position was taken that society needed greatly enlarged numbers of trained teachers, scientists, and engineers and that it was both appropriate and essential for society to support students through their graduate experience and to reimburse the university, in part, for the added expense of training the increased numbers of students.

The few here who are deaning at the time may remember that this came as a startling development, generally welcomed but sometimes with suspicion; but we did gear up at the behest of the government and set in motion a production line which simply could not be cranked down as rapidly as the policy was changed. The change I am referring to was the clear decision made, apparently, about four years ago, that the inflated production was no longer needed and, most importantly, that the recipients of advanced education should pay, not society.

In retrospect some excess capacity was developed, and there were opportunists and empire builders among our faculties; but for the most part we responded to a clearly enunciated national need, and then suddenly were turned upon because we have been unwilling to purge the pipeline. We have agonized here at this meeting over the process of readjusting to a situation where all students in some institutions of highest quality and prestige and in many institutions in certain disciplines could no longer find full support. Even institutions not offering the doctorate have come under the same criticism.

It is not easy to think the unthinkable, but the hard decisions are being made; and many more still remain to be made. It is not surprising that it came hard; of our 300 member institutions, 113 of the deans or institutional representatives have been changed in the last year; so it is safe to assume that there are few now in positions of responsibility who have had experience in administering graduate programs where the "walk-in" student is not a new phenomenon and where first-rate students seek admission even though financial aids are not available. So, much of our reassessment just now is concerned with the basic question of who pays, how much, and what kind of a case can be made, and should be made for restoration of federal and state subvention. Finally, we are required to go about the finding of alternate sources. This is an area in which we have not thought deeply for a decade but in which good thinking is urgently needed, first at the local and then at the national level. And it is gratifying to see evidence of the extent to which the challenge is already being met.

I am much less disturbed now than formerly about the dire predictions about manpower supply and demand. These studies have served their purpose, perhaps beyond what was intended. In response, changes have been initiated which make some of the steady state assumptions untenable; hence, the predictions are to some degree already of questionable validity. The short-run vocational aspect of doctoral training has been overemphasized. Who can say whether 5 or 10 years from now when our doctoral production may be at a lower rate that we will then have too many Ph.D.'s in our society.

We too often still get caught in the trap of talking about doctorate production as if it were a manufacturing process, subject to planning and control with inputs, outputs, processing costs, pipeline (which I recognize I have used already) freely bandied about. I am not being critical of our Gradcost Study; I am questioning the terminology and philosophy when we are addressing ourselves to reassessment of our capabilities, our priorities, and our long-range objectives. What is emerging now is a demand for high-quality graduate education, quite probably with differing structure, based on different personal goals than most students formerly had, and on the part of students who do not want to "cop out" but who want the type of educational experience we are best qualified to give them. I do not believe the external degree programs and activities are going to pose a significant threat to what we can do and are being asked to do if we realign our resources and do our jobs well.

I apologize for attempting a small speech when this is billed as a report. I may already have revealed myself as an idealistic optimist, but I think I am correct in sensing a quite different mood than was evident in our meeting last year — there is much less evidence of shock and alarm but a pervasive undercurrent now of realism, of willingness to attack the problems before us and evidence of confidence that our problems are not insoluble.

History will tell whether I am mistaken; but, if my visceral sensibilities are correct, I feel it is important to reflect the new mood.

Now, if I may, a few items by way of a report:

First, as you know most of the work of the Council is done by our committees and commissions — you have seen and will see much evidence of the products of their labors. The Doctor of Arts statement which has just come out resulted from arduous labor, but it is important and will surely have a considerable impact. The Gradcost study is by all odds the most extensive project yet undertaken by the Council, and it should be of major significance. It is hoped that the published Gradcost reports will be in the mail to each of our member institutions — to the graduate dean and to the chief business officer — within 60 days.

The consultation service is still very active and effective. This last year we arranged for 91 consultations compared with 92 the year before. This involved 150 consultants compared with 141 last year. With the increased interest in self-evaluation already underway or contemplated in many graduate schools and with emerging needs for new interdisciplinary programs, the consultation service will probably grow and continue to be a significant service provided by the Council.

There are several new projects being initiated in cooperation with the Graduate Record Examinations Board. In each case, funding is being provided by the Graduate Record Examinations Board. These projects could not be undertaken by the Council without the generous support both in funds and in expert staffing, all of which we gratefully acknowledge.

Formal announcement of the establishment of the Panel on Alternate Approaches to Graduate Education will be made soon. The Panel will be made up of distinguished educators with varied but distinguished backgrounds who will consider in detail the many problems confronting graduate education arising from new societal demands and interests. Three of our member graduate deans will serve on this panel as well as two university presidents, an administrator in a state education department, a key executive of a major publishing company, a director of a continuing education center, a professor of English, a professor of physics, and a leading engineering dean. I have the honor to serve as chairman. Staffing will be provided by the Educational Testing Service in the person of Bruce Hamilton as Executive Secretary and Richard Burns, both of whom most of you already know. The first meeting will be held in the middle of February. The work of this panel will be closely coordinated with that of the Commission on Nontraditional Education, chaired by Dr. Samuel Gould, which has already been working for some time but focused primarily at the undergraduate level. The recommendations and the findings of both groups will be published independently, although liaison will be maintained to avoid duplication.

Another major new activity of the Council and the GREB is publication of a "Graduate Programs and Admissions Manual" which we hope will include data from essentially all graduate institutions on programs available both at the master's and doctor's degree levels in all fields. Policies for this publication are being established by an editorial committee. Information will be solicited from all graduate schools of record including, of course, all members of the Council. Your full cooperation is solicited. As now planned, the manual will be offered in four sections covering the biological sciences, the health sciences, and related fields; the arts and humanities; the physical sciences, mathematics, and engineering; and the social sciences and education. These may be purchased as separates or for advisors boxed sets will be available. The price will be kept low — in fact, somewhat below cost. It is hoped that the manual will be widely used. We believe that having available in one source authoritative information on all graduate programs available in the United States will be of service not only to prospective students but to all those concerned with graduate education as well. We hope to be able to publish the first edition in time to be useful by the beginning of the next academic year and that we will be able to produce an updated edition annually thereafter.

We solicit your continued interest and support in the new program established by the council to reward scholarly achievement in the humanities and thereby to honor our distinguished President Emeritus Gustave O. Arlt. Our objective is to build the corpus of the fund to the point where annual income can assure that the award program can be made permanent and continue indefinitely on an annual basis. Contributions already received suggest that achievement of our goal is in sight. Additional contributions to the fund will be welcomed. Policies for the award program are being set by an advisory committee which has already been appointed. The first award, which we hope can be granted at our annual meeting in 1972, will be based on a scholarly publication in the form of a book published by an individual then teaching in an American university within five years of the date of the receipt of the Ph.D. degree. The first year's award will be based on a publication in English and American Literature. The title of the award will be The Gustave O. Arlt Award in the Humanities and as indicated, it is hoped that it can be awarded annually. It is expected that different fields in the humanities will be chosen in different years. As now contemplated, the award will consist of a cash grant and payment of the expenses of the recipient to attend the award ceremony, which will be conducted at an appropriate time, probably the luncheon, during our annual meetings.

It would neither be possible nor advisable to attempt a complete inventory of all of the activities of the Council in this report. There is new activity and concern in the general area of accreditation as it affects graduate work. Problems related to the status of graduate assistants with respect to liability to income tax seem ever with us, but it does appear that there will be an opportunity in the near future to provide input for a planned revision of tax rules affecting graduate students. Exploratory discussions have been initiated with the officers of the Canadian Association of Graduate Schools working toward the possible closer affiliation of our two associations. We have member deans of the Canadian Association here with us as our guests at this meeting, and we do welcome them. It is hoped that closer ties between our two associations may be established. New federal legislation is in prospect which could be of great significance to the future well-being of graduate education in the United States. We will, of course, continue to monitor closely the activities leading to enactment of the new legislation and to provide input to the appropriate committees and information to our member institutions as the legislative process moves forward.

I wish now to report briefly the results of our current enrollment survey. You will recall that each of our member institutions was requested to furnish data on graduate enrollments as of October 15 of this year. The simpler survey which was conducted a year ago was surprisingly well received and our figures were widely quoted. We feel that this year's survey has been improved significantly, and that it may also be of value. There is no other source of current enrollment data available. The response rate to our questionnaire was 93%. This unusually favorable response is taken as an indication of the high interest among our member graduate schools in the topic of the survey, and we do thank you for your excellent cooperation. The processing of the data has all been conducted at ETS, and we do wish to thank Dick Burns for his excellent summarization and analysis of the data submitted. A detailed analysis and report will be made available to each of our member institutions, to the press, and to interested public agencies; but I should like at this time to present a few of the highlights from that summary.

Total enrollment reported from 276 institutions is 557,000 students currently enrolled. This is an increase of 1.4% over corresponding figures for last year. In partial detail, the public institutions with the Ph.D. as the highest degree showed 1.6% increase. The private doctorate-granting institutions showed a 1.3% decrease. All public institutions showed a 1.8% increase in overall graduate enrollment as compared to a 0.1% increase for private institutions. These are modest increases in comparison to the significant annual increases of just a few years ago, but these do run contrary to the widely accepted view that graduate enrollments are decreasing sharply.

First-time enrollments show a similar pattern. Overall these are up 2.1%. For private institutions the increase is only 0.6%, while for public institutions it is 2.6%. The number of graduate students holding assistantships decreased in 1971 in comparison to 1970 more for the private than for the public institutions. Public institutions showed decreases of 1.4% while private institutions decreased 3.5% with an overall decrease of 1.9%. Fellowships showed a marked decline in 1971, particularly at public institutions. There is an overall decrease of 11.5% among the institutions reporting. In the public institutions, the decrease was 17.7% while in the private institutions it was 4.8%. The number of degrees awarded continues to increase but at a somewhat slower pace for doctorates than in previous years. Master's degrees have been up 9.1% in 1971 and Ph.D. degrees up 8.4% over the corresponding period last year. A continued high rate of degree production would, of course, be expected because of the time requirements for the degrees — the so-called pipeline effect. Interestingly enough, the data show no significant shifts in the proportions of full-time and part-time students over the two years being compared. The returns covering the distribution within and between fields were not sufficiently complete or comparable so that valid interpretations can be made. We do intend to continue the survey next year. We hope to refine it so that the results will lend themselves to accurate interpretations, and we do solicit your continued interest and support.

This will complete my report. I do thank you for your courteous attention and for the opportunity to serve the Council and to bring to your attention some of the accomplishments and some of the ongoing activities of your Council which I have the pleasure to serve. We look forward eagerly to the coming year. Predictively, it will not be an easy year. It will almost certainly be an exciting year. We feel sure that the Council will move forward, and that graduate education will meet its many challenges as it has always done. I look forward to the coming year eagerly, and I hope each of you will as well.

Open Forum

David R. Deener

Dr. Crawford: I have two questions.

Why could not we have a duplicated sheet with some of these numbers that Boyd read off a little too fast for me to jot down in order to take home tonight?

Dr. Burns: I spent most of last week working with those figures and I redid them at the last minute in order to get it up to 93%. I had them once at 87% and another 18 questionnaires came in, and on Friday of last week I redid them all and sent the report to Boyd.

We have a report; it was done in a great hurry. There are some data that ought to be put on it about things like what part-time, full-time student means, things like that, that as Bryce knows, in my eagerness to be accurate, I would like to have on any copy that is widely circulated. But Boyd has it in hand and I have several copies in my briefcase, the statistics as generated out of this 93% returns, and if Boyd is willing, they could be Xeroxed very quickly. In fact we talked about it for this meeting.

But it was somewhat in the interest of making sure that what was released was not subject to misinterpretation that we were going to have some of these qualifications in, and the fact that we wanted a little more time so that we could pull a little more out of the data.

It would have been a matter of a week or two at the most. The data is available if Boyd wants to release it.

Dr. Page: Really, I think I would agree with Dick. If you could give us until next week, we could put it in the mail to you and I think it would be in much more usable form.

Voice: I am referring to the manual that would be useful to graduate students, and I guess I am interested in whether it will really be useful to graduate students, one that will publish programs at different universities, departments at different universities, but it may not give the graduate students the really useful bits of information.

For example, if a graduate student came to me in a field that I did not know anything about and said, "Should I go here?" What kind of information would I need?

That is the sort of information the manual should supply.

Dr. Shull: The information that we have today, we are stuck with it. There is not much you can do about it. We are part of it.

Many of you are faced with graduate enrollments in organic chemistry; a certain number of students will come into organic chemistry this year. These undergraduate enrollments are increasing, they are going to be upon us three years from now in the graduate school.

Is CGS doing something about forewarning us?

Voice: Are you suggesting that it might be wise for CGS to keep track of undergraduate enrollment?

Voice: To ask about unusual or early warning signals in the sophomore enrollment in organic chemistry?

Voice: Is there any reason why we cannot have a look-ahead feature?

Voice: Is it fair to ask you, are the deans here prepared.

Voice: Of course, the graduate dean does not know.

Voice: Okay, but where do we get it?

Voice: The undergraduate dean, of course.

Voice: How can you say that is an item you do not know?

Voice: Because I have close contact with my graduate dean.

Crawford: There was one thing that Boyd said that should be reinforced. He did allude to the fact that from time to time CGS sends out something to the graduate deans for information. But CGS can only help if each graduate dean in his particular little empire, hegemony, or whatever, exerts his influence to get the information CGS needs.

I would like to reinforce the fact that every one of us cooperate wholeheartedly even when sometimes we are not quite sure what the devil CGS is trying to do, or whether we approve of it, to lean on and persuade, if necessary our colleagues to produce the information that CGS needs. Carry to them the message that this is not just another questionnaire from some commercial organization like Peterson's Guides or some inefficient organization like HEGIS, or the Office of Education, but this is our organization working for us and working very well, and dependent on us to work even better.

So I would like to underscore, while I am on my feet, the sort of latent plea that I think you were making, Boyd, that every graduate dean, when he gets the signal that CGS is asking the chairmen of his chemistry and psychology and economics departments for information or something of this sort, that every graduate dean use every persuasive lever that he has to get that information.

And if it comes to the situation where a graduate dean is asked to get information about undergraduate enrollments that have a prognostic indication for graduate enrollment, then, yes, I think it is incumbent on the graduate dean to go and persuade his friend or his enemy as the case may be, the registrar or the arts college dean, or whatever, to look at the information and produce these figures, and I hope we would all really work at this because it is in our common interest.

Dr. Fraenkel: I think maybe all of us can get undergraduate enrollment figures, and I really think that what Harry Shull said is extremely important. Knowing Harry, what he really means is what was the gleam in the father's eye; that is what we have to go back to. We do not quite know how to compute that yet but if he is going back to undergraduate enrollments, then I really wonder why we cannot ask Boyd to approach, maybe ACE, or some of the other educational organization, because this is not a question that just concerns graduate deans. It has to do with the health and structure of all of our institutions and if the presidents are not aware of this, then they are really in trouble.

And I think that we should make every effort to go to other organizations and have it delivered to us because it is going to be very important to every president and every university that has graduate programs.

Ms. Sassower: My name is Doris Sassower and I am former president of the New York Women's Bar Association and Phi Beta Kappa Alumnae in New York. Earlier this year I also filed charges against all the law schools in this country on the ground of discrimination against women in their hiring and admission policies.

With that introduction I would like to express a few thoughts which had occurred to me by virtue of the fascinating coincidence of this meeting taking place at the same time and in the same place as the meeting of the Women's Equity Action League which is occurring next door in a two-day session taking up the questions of discrimination against women in the educational field.

I did not know, really, too much about the composition of this association or its purposes, and when I inquired as to your program and what matters you were taking up, I was informed that you were considering the bread-and-butter questions, the things that the deans and counselors in the colleges and universities are worried about.

And as I reviewed the program myself, I was interested to see that there does not appear to be any worry about the question of discrimination against women in education or higher education, or in graduate education. It strikes me, just looking around here, that possibly if the composition of the Council of Graduate Schools in the United States were represented in reverse proportions of women and men, it might be that you would be in less than a state of euphoria on that subject because there really is a great deal that ought to be worried about and ought to be the proper concerns, it seems to me, of deans and counselors in higher education.

I will just try to make this very brief. I appreciate your kind consideration and attention, and I do not want to impose upon it. But there certainly is no need to bore you with statistics which you undoubtedly are all thoroughly familiar with, and certainly the affirmative action programs which are now being proposed by HEW are surely a matter of common knowledge already. And Executive Order 4, which was just signed and is going to be published over the weekend is certainly something we are all going to have to deal with very shortly.

But this is an area of profound importance and legislative recognition before the Congress affecting higher education certainly are matters of profound importance and it seems to me that, considering that the President's Task Force on Women's Rights and Responsibilities last year characterized the discrimination against women in education as one of the most damaging injustices that women suffer in this country. I would think it would behoove this association to include on its program next year, if it is not too late this year, something that resembles what has been going on for the last day, and certainly tomorrow.

Dr. Deener: Madam, we will pass along your suggestion to the new Program Chairman. We wish to thank you for sharing your thoughts with us.

There are a few people who have some additional topics of interest. I call on Dean Cheston.

Dr. Cheston: My remarks are about something that has not been raised here at all at this meeting. It may be something we can explore in future years. You university administrators, you really have the opportunity to be evaluating with genuine objectivity. The university president generally bases his views of his academic executives, deans especially, on his personal contact with them, laced a little bit with casual hearsay. The faculty views of the same deans may often vary radically from those of the president, and students for their own part may also hold still separate views.

Evaluations, take into account opinions of all the sectors of the university community in an organized fashion. However, it seems to be very rare within the American academic community. While private industry has for many years studied executives with tools specifically designed for objectively measuring their performance, my brief search for materials similar for the university executives has indicated there has been very little work done in this area. Most people I have contacted in educational research have not heard of administrative evaluation being applied to academic administrators. There is some material on the subject, however, and what there is is of considerable value and points to the fact that evaluations can be carried out in a number of different ways. They can be made either wholly within an institution or with the aid of outside consultants. They can be managed by an individual or by a committee. They can be fairly simple or very elaborate. Each institution no doubt would develop procedures to suit its own needs, but always its primary goal would be to insure the greatest objectivity possible.

An element common to many procedures is the development of carefully designed questionnaires. These questionnaires would be aimed and tailored to the various sectors of the university community, department chairmen, faculty, fellow deans, students who complete questionnaires. These would provide a broadly based understanding of how the dean is perceived by each of these sectors and bring out differences among them. The results of the questionnaires could be reviewed solely by the dean's superior or made available to the dean himself for his own edification.

Some questionnaires of this type do already exist. The Purdue Research Institute has developed one that explores the dean's administrative planning and leadership, use of funds, relationship with subordinates, and other areas of his responsibilities. This questionnaire supplies also a system to interpret the results and rates the dean in comparison with administrators at a number of different universities.

The ACE, in its academic internship program, has developed questionnaires with some useful materials in them, and individual universities such as Georgetown have also developed some of their own for their specific needs. Another useful procedure is to have a set, a systematic set of interviews which can supply a greater depth of understanding in a dean's administrative style. Such interviews, needless to say, would be handled with the greatest of care, preferably by an outside consultant.

Once again, the results could be reviewed solely by his superior, or made available to himself.

One university, by the way, supplements its evaluations with management seminar training aimed at enlightening administrators about their administrative styles and stimulating discussions among themselves about administrative techniques. Through frank discussion and open discussion, a dean can obtain a fairly accurate view of how he is viewed by others and, therefore, target the weaker areas of his administrative style.

I am sure with further research on this subject, other techniques will be uncovered. There may be in some universities already in this country some highly developed procedures in existence that can be implanted in other universities with only slight modifications.

The university administrators, especially graduate deans, are now being called upon to perform increasingly varied roles. Besides fulfilling their traditional functions as educators and scholars, they are having to take on the attributes of cost accountants and lobbyists, just for example.

If deans are expected to perform these roles, they should have the benefit of objective evaluation of their administrative styles and should encourage their home universities to develop appropriate procedures.

Cheston: I think if we had been subjecting ourselves to this type of evaluation, I thin k we would have been able to handle many situations that have come up in the last five years with greater efficiency and greater political skill.

Shull: I just wanted to ask whether you had thought about applying the same thing to our presidents.

Cheston: Yes, and I did not get very far in the argument.

Dr. Kenig: We are both new to this organization this year and we wanted to raise some questions about continuing education vis-à-vis graduate education. I think you cannot talk about what an institution wants to do out of context, not talking about what it is and the market it serves, so I would like to give you a little bit of background about Drexel, give you some of our motives behind this continuing education program, and then I will allow my colleague, Solon Morgan, to talk about some of the implementation of the program.

Drexel is a private university. The combined enrollment, day, evening, graduate, undergraduate, full time, part time, about 10,000 students. The main feature of our undergraduate program and its greatest strength is the cooperative education system. This is a program whereby students alternate periods in school with matching periods in industry.

We have six colleges, six day colleges, one evening college. All of the day colleges with the exception of our newest, the humanities, offer master's programs. The business college offers an M.B.A.

We have Ph.D. programs in the College of Engineering and the College of Science.

The reason there are two of us here – actually there are three – is the graduate dean, Otto Witzell, who is not here this evening, and Solon Morgan and myself are assistant deans. Actually he is the academic dean and I'm the research dean. This is of the entire university.

We have about 2,000 graduate students; about 1,500 of these are part time. The remaining are potentially Ph.D. candidates.

We have become interested lately, after some discussion among the various academic departments and among the administration, in adopting and are pushing forward with the continuing education program. We want to keep this separate from the graduate program.

We set up a director of the continuing education program. We feel that there are three reasons for going into continuing education. One is that we recognize the demand. There are students who want this kind of education; that is, an education which is a formal postbaccalaureate academic program for credit but not leading to a master's or doctor's degree.

We have not taken any formal surveys in this regard. We have on other questions and from that we feel that there is a market. We feel that this type of program will help utilize what our graduate program cannot do, all of our faculty and facilities to the fullest capacity and, therefore, provide some income to help support the university.

We also feel that this type of program will introduce another area of flexibility and that we can use it as a trial balloon area, that we can introduce programs in a way that we could not do in our regular academic curriculum. We have three motivations:

We recognize the student demand; we think it will provide income; and we think it will provide additional flexibility.

I think Solon Morgan will tell you how we intend to implement this program.

Dr. Morgan: Just briefly, I would like to discuss this under four headings: continuing education as an entrance to graduate education; continuing education as an alternative to graduate education; continuing education as a simultaneous supplement to graduate education; and fourth, continuing education as a follow-up to graduate education.

Let me emphasize again that what has been said and what I am about to say reflects what we are talking about, what we are about to do, and what we think. That is the reason that we wanted to have a few minutes here. We wanted to get reaction from you.

This reminds me, though, that you have to be careful. Some years ago, one of my graduate students said, "I went to a conference with my boss. My boss got up and made a speech and he said this, that, and the other about what is going on in the company.

My student remarked further, "When my boss sat down I turned to him and said, 'Sir, we're not really doing that, are we? You said we were but I don't know about this.'

"The boss said, 'No, we're not doing it but we're going to do it.' "

So I want to make it very clear that we are not doing this right now. It may come out different from what it sounds here tonight.

All right. Just quickly now, continuing education as an entrance to graduate education. What we are thinking about is having students who come to us, who cannot meet our standards, to be sent to our office of continuing education. These students could be admitted through the office of continuing education. If they are serious about getting into graduate education, they would go into a core of courses that are real graduate courses.

When they have taken 12 credits with a cumulative B average they can come to us again and apply to be admitted. What we are thinking about now, if they make out well in these 12 credits, they would be admitted. Quarter credits we are talking about, quarter credits.

Now why do we think this may be good? Because it will take care of late bloomers; particularly men sometimes do not even bloom until they get to the graduate school age. We do not want to turn them away. We would like to find out who these later bloomers are, and take advantage of it.

Furthermore, we believe that this method will help a potential graduate to find his niche since he will come in to the office of continuing education, he will be able to play the field if he wants to in our core courses. He does not have to apply when he has 12 credits; he can stay longer before he applies.

And furthermore, we feel this method will in some cases enable a student to get ready to enter graduate education. He may take one of our core courses and decide, well, maybe he would better back up a little bit, go into our continuing education courses which are not for graduate credit, and then come back into our core courses and get in.

All right, so much for the first point.

The others will even go faster.

Point 2: Continuing education as an alternative to graduate education. It seems there will be at least two types of students who will want to use continuing education as an alternative to graduate education. One type will be the type who cannot make the grade in our grad school. He is a graduate with a B.S. or B.A. He wants to take some good courses but as we say, he cannot cut the mustard. We hope to have courses that will be good for this type of student. We hope to have a lot more of these courses than we have now, and we are slowly building this program.

The second type of student who will likely use this as an alternative is the one who thinks he does not want a degree. A student can come into the continuing education program, if he goes according to plan, he can take courses all over the university in any package he wants, because he will not be under the direction of any program except the continuing education program, and that is going to be very flexible. A student will make his own graduate program and he may even combine with it many nongraduate courses in our continuing education courses.

Point 3: Graduate education as a simultaneous supplement to graduate education. We believe even a graduate student who can meet our standards and will be in our program may want to take some courses that we would not like to offer for graduate credit. It makes me think of what proudly universities have done to high schools. We have forced high school students who are interested in becoming academic in life to take a program that in my mind has been far to stuffy and rigid.

Today we are seeing that open up, colleges dropping foreign language requirements. I think we will see more of this, where a high school student will be able to have more flexibility as he prepares for an academic life.

So I believe that many qualified graduate students may want to mix into their program courses that we would not even want to put into our graduate program but we would like to have in our continuing education program.

Finally, continuing education as a follow-up to graduate education. All of us believe, I am sure, that life-long education is the thing for the future. We may disagree about the implementation of it, but I will be awfully surprised, very surprised, if we are not unanimous in our opinion that life-long education, serious life-long education is in the cards.

Drexel will go along with this and has always gone along with this, and we have allowed degree students to take further courses of any kind they want. We just feel that this program of continuing education, as it is dovetailed and integrated with our graduate program, will make this better.

One last thought, and I will conclude, a little bit off the point, but not too mcuh.

Being a professor of the College of Business Administration, I find it hard to believe sometimes that we could have ever thought that we could produce too many Ph.D.'s. In my own field, business administration, we desperately need as executives people with far greater training than they can obtain even in a good Master of Business Administration program.

I look forward to the day when we will have Ph.D.'s more and more coming out of our Business School who will not be long-haired Ph.D.'s, but practical businessmen with in-depth training and creative ability that they get from doing research for a real dissertation.

I believe the type of program we are talking about will aid in making our Ph.D.'s not only quality but also a reliable product. That is, the product will function well in the environment in which it has to function.

Dr. Boddy: I would like to make a couple of very serious comments, triggered by two presentations tonight.

In the first place I think our legal representative posed a very real problem to us, and the fact that she thought we were not paying attention to it is I think a disadvantage to us.

I really think we are working very hard on the question of the blatant discrimination that has taken place for women in education, not in our own area but in the background of the area, and we now have the same problem that we had with the minorities in trying to correct for discrimination at other levels.

Secondly, I would like to say something fairly seriously about the problem raised by the last two speakers. It is a critical problem in graduate education. We have been faced with the problem a long time and the university has finally institutionally been taking a look at this problem.

Well, what can we do about people who want postbaccalaureate education but cannot qualify for graduate school, or for very good reason, even if they could qualify, graduate programs are not the appropriate ones?

The fundamental problem is that our faculties in the major graduate institutions have two commitments, one to the production of their undergraduate degree candidates, and one to the production of their graduate degree candidates. And I view the demands for other kinds of services as important, interesting, but low on the totem pole in terms of priorities because we are all pressed by restrictive situations.

The undergraduate college says we cannot admit the special student, the adult special as we call them in Minnesota, because we are turning down very well-qualified undergraduate applicants for that undergraduate program which is our main project.

We are turning down something like over 50% of the applicants to our graduate program, many of them well qualified, because of restrictions in our faculties to handle them.

How do you turn the faculty around and the institution around to seriously considering their responsibilities to this group? It is a very difficult problem and I am sure we do not, and nobody else knows the answer.

I would suggest it is not the problem of the graduate school; it is an institutional problem. One reason we do not see this need is because many of the people that we see as the demand for this kind of thing are the people we turn down, but there are lots of others, too, of all kinds.

And the institutional response, I must say, in the institutions which have these limited capacities has been essentially saying "We'd love to do it but we don't know how," and they are unwilling to make the commitment. So I think the problem raised is a very serious one. But I wish the major graduate institutions worried more about it and not leave it to the institutions that are looking for ways to fill up capacities.

Dr. Gross: I am one of the 113 new deans who has moved up from department chairman to graduate dean. I was very much impressed by the subjects here, but as a newcomer I might be permitted to make a few remarks.

I believe there was very little in the program of interest to our fundamental questions. Maybe many of you have gone through it for years, but as a newcomer to the deanship, I feel that there are many shortcomings in the administration of universities.

Many of you seem to have become so used to it that possibly nobody thought it worthwhile to discuss. If I might make just a quiet suggestion, maybe we could, from our side of the picture, look into the administration of universities into the position of graduate deans and graduate schools, not in the few privileged institutions but in the many institutions which have an old graduate program, like in our institution which is 90 years old and which will remain small but still needs an appropriate place in the university. So if I might make a suggestion, let us talk about the government of universities and the position of the deans in it.

Is the dean only the servant of the graduate department chairmen or should the dean be able to follow an appropriate policy? Is the dean subject to all kinds of pressures, financial pressures, to make the graduate school present a balanced budget without even having a budget on his own, except for his own staff? Or should we demand to have schools give the dean an appropriate influence over the budget of his own graduate school?

Those are all just open questions. I think you all struggled with when you started but the newcomers among us, we are just astonished that a situation like that can exist in so many institutions, and I hope you will give it, one way or the other, serious study.

Dr. Bragonier: I just wanted to say two things quickly, to thank all of you that participated in the sending back of the questionnaire that I sent out here that latter part of November. I am happy to report a return of about 75% from the questionnaire regarding the use of pass-fail or the nontraditional grading system as a matter of admission or awarding of fellowships, traineeships, and scholarships at the graduate level.

The returns are very interesting. I have completed the tabulation. I think the one point that should be of common interest – I will send out the complete reports to you as quickly as we can get them prepared – is that the group generally, about 75% of those responding, agreed that from 10% or in the neighborhood of 10% pass-fail grades particularly where not in the student's major, posed no problem. This may be of some solace to some of your groups that are thinking about this.

Some of the people who responded, I would say about half, will go along with as much as 20%, possibly 25, again if they are not in the student's major. Anything beyond that, they turn thumbs down on pretty solidly.

Voice: I would like to mention this business of the continuing education that the young man mentioned. I believe this is a problem much larger than perhaps all of us have been willing to recognize. It is on us in greater dimensions than we are aware of, I believe. We are just beginning to see the crowds build up that want this kind of education and it is not necessarily graduate oriented. Should the graduate schools be involved in this and if so, in what capacity? If not, in what ways must we be prepared to take the products of continuing education because we are going to be asked to do so, I am certain of that. We are just at the beginning of something we are finding is popping up in a number of places. The young man mentioned just one aspect of it. I would suggest this is a very appropriate topic for a program for next year.

Eighth Plenary Session: Business Meeting

Saturday, December 4, 1971, 8:30 a.m.

Presiding: Stephen H. Spurr, *University of Michigan*
Preston Valien, *United States Office of Education*
Joel Snow, *National Science Foundation*
Business Meeting
Postlude: Open Forum

Proceedings

Dr. Spurr: At this time, I think that we are enormously impressed with the turnout of graduate deans on Saturday morning. We are delighted not only to have such an excellent turnout this early on Saturday morning, but delighted that we were able to get such a knowledgeable and distinguished input as to what is going on in the Washington Scene. We have with us the Acting Associate Commissioner for Higher Education of the United States Department of Health, Education, and Welfare, Preston Valien, an oldtimer in graduate affairs. When I first became a graduate dean, I had the privilege of working with him on fellowship matters and was impressed at that time by his knowledge, and his vision is, I am sure, undimmed by the early morning hour. We will have a brief address by Dr. Valien and then he will be available for questions.

I think we could move somewhat into the business session with this first session and still finish well on schedule.

Report from the U.S. Office of Education

Preston Valien

I came to the Office of Education and began the program about February 1965. We had to have the funds obligated by June 30, 1965, and the program had to be organized. We did this. But we hit upon a very fortunate circumstance which made it much easier and more comfortable to do the job than would otherwise have been the case. We found a number of graduate libraries plans had been lingering in the president's or dean's desk, and we pulled those out, and during that first year 40% of that $60 million went to graduate libraries.

We, of course, are in somewhat of a different atmosphere today in terms of graduate education, and yet in some ways I think that it depends upon the perspective as to how optimistic or how pessimistic you might feel.

For example, it is somewhat of a source of general encouragement for some of us who have been watching the scene for the last few years to see the great effervescence, I guess you might say, of support for higher education that is now in the Congress as compared to a couple of years ago when there was so much anti-higher-education feeling that we did not even have a bill brought to the floor of the Congress. Now there is a great deal of support and, of course, it varies in terms of a certain segment of higher education and in terms of certain approaches that have been suggested to be taken.

Certainly in terms of graduate education, which you and I are particularly interested in at this time, the word at the moment, would certainly be one of austerity and resourcefulness for the present time. And yet in a way you could say the possibility of promise and hope for the near future is also evident.

From the point of view of austerity, I am sure most of you know that Title IV of the Graduate Fellowship Program has been one of the major graduate fellowship programs. It does not contain any funds for the new fellowships. It has a continuation of some $26,900,000 for 1972 as compared to our peak point of some $86 million in 1966. And then we have in the Part V Fellowship program, of course, some $5,440,000 which is a standstill budget for that program in 1972.

So that I think that in terms of that aspect of it, we are faced with the necessity to support and promote in a sense the possibilities and strengths of graduate education.

I have been somewhat surprised and a little disappointed in that to some extent the graduate community has not made a stronger effort with the Congress in pointing out, particularly, I think, the lead time necessary for the preparation of advanced personnel. I think this is a point that has not been adequately pointed out, and I think that the graduate community is in a better position to point this out than the bureaucracy, which is always suspected, as you might know, of self-interest in some regard in this respect. But I think that that is something I think needed to be pointed out and I would hope that the leadership of the graduate community, which you represent, would take that responsibility on in a very serious way. We need to have a more even flow through the pipeline than we have had.

I am not sure, because I do not sit in the Congressional offices, just what input you have been making there from the point of view of getting your own points of views heard. But as you know, we do have in the Congress at the present time very important higher education legislation, which includes legislation for the support of graduate education. That legislation has passed both houses of Congress, and it is scheduled probably to go to conference after some additional action by the Senate. It will probably go to conference in February. So there is still time to look into it and get whatever input you think you would like to get into these people who will be involved in the conference, or your own Congressman, or your own Senators. And you might get them informed if you desire to do so.

You probably know that there are two different approaches to the graduate support programs in these two pieces of legislation. One, on the House side more or less continues the existing authorization for the various programs that are in existence. On the Senate side, however, there is a little different approach, and it is one which I think you may want to look at more closely than you may have, and that is this combines the authorization for the existing programs, the language and area studies programs, the improvement of graduate training, the education to public service, and the national education of programs into a single program for the improvement of advanced training. It merges the NDEA fellowships into a new fellowship program under which the Commissioner of Education would award fellowships to students based on ability and need to both graduate and professional students from economically disadvantaged backgrounds. It seems to me that philosophically that approach has something to offer. As you know, we have had legislation, and this is authorization legislation that we are talking about now, but we have had authorizations for many of these programs which have never been funded. This, of course, includes education for the public service, improvement of graduate training, the program of clinical experience for law school students, and so on.

It seems to me that perhaps putting these together under a broader program might break them out of the old mold of nonsupport and enable a somewhat newer thrust in the graduate education area.

We have, of course, been rather limited in authority in the Office of Education from the point of view of graduate education and graduate training, because our authority has been limited almost exclusively to the training of persons for the higher education establishment. It was for this reason that I was hoping that maybe we could have broken out of the mold and gotten some funds to train persons for public service education and for law.

This has been the chief focus of our fellowship program. This new program would give us a broader thrust by taking us over into the area of public service as a possibility, a possibility of training persons for the environmental sciences, for urban affairs activities, for mineral industries, and so on.

In the legislation which is now before the Congress, there are two new thrusts that I think would have some interest as far as graduate education, and one, of course, is a program which is pretty much out of the woods, as far as being in difficulty goes, and that is the National Institute of Education, which is in both of the bills for the encouragement and development of research and development in the area of education at all levels.

As I say, that is in both bills and it likely to develop as a new mechanism outside of the Office of Education, in a sense, and with a director of its own. There is some question as to what the actual mechanism of the director's office would be like, but that is the general idea.

On the other hand, we have what we call the National Foundation for Higher Education, and it is incorporated in the Senate bill as the National Foundation for Postsecondary Education. It is somewhat along the same lines as the proposal which was made a year or so ago, but which has now been modified in terms of its substance. But this bill was deliberately excluded from the House bill for reasons of various kinds, one being that the House was very much in favor of the National Institute and was fearful, to some extent, that the Foundation would duplicate to some extent and overlap the National Institute, and they did not want to do that.

But it seems to me that the National Foundation for Postsecondary Education would give a measure of flexibility to encourage new developments, new thrusts, and innovations, and bring about a change in higher education, which would be salutary and which would enable us to get away from the rigid confines of some of our categorical programs that we presently find ourselves.

If a broadscale program comes in now such as the one we have, for example, the university without walls, would have to assign somebody full time to go all over the Office of Education to put various pieces together in order to support a program like that. We finally did it for that program with about $350,000 coming primarily from the Bureau of Education. But we had to go to the Bureau of Libraries, Bureau of Research, and other bureaus in order to get pieces. If we had a foundation, this could have been taken up as an innovative thrust and pushed ahead as a whole without having to shop around. When you shop around you not just shop around freely, because what you have, of course, are different programs with different guidelines, as you know, and different funding cycles. And it is not a simple matter to put those kinds of things together.

But it seems to me that the National Foundation would offer a very useful mechanism for graduate education, and I think you may wish to examine it in terms of considering the extent to which you would be willing to support it.

So those are some of the activities that we have.

Now, in terms of graduate education as such, in the Office of Education, we are focusing more and more on the newer careers. At least, our plan is for the training in the newer careers, and also for the training of persons from disadvantaged and minority groups. And this is another thrust which I think the graduate schools could very well begin a serious examination of their curricula, their programs, and their general methods of operation in order to be in line and give support to this thrust, I think, long overdue thrust, which has now come upon us. And one part of our program, what we call Special Services for Disadvantaged College Students, has as one of its purposes, the encouragement of students from educational backgrounds of low-income families to look forward to graduate and professional education. And we are beginning gradually to support a few activities on a pilot basis trying to see what we can do to implement this particular purpose of that particular legislation, although that is, of course, at the undergraduate level of operation.

So those are some of the things that I think we need to look forward to. I think the graduate community has enough influence and prestige to be more influential than it has been. And I am hopeful that you will all use your influence to support those aspects of our new higher education legislation while it is still in a somewhat fluid state.

Discussion

Dr. Wolverton: Bob Wolverton from Miami.

I am interested in your comments about the National Foundation because I perceive in them a sort of reflection of the administrative point of view, and I am well aware of the fact that Edith Green, for one, is quite opposed to this.

My concern is that having heard her very recently, express her feeling that there might be quite a battle; that the Administration feels very strongly about the need for a National Foundation which she opposes. At the same time she wants very much to keep the institutional grants alive, and she expressed the fear that the Administration might very well threaten to strip the institutional grants out in order to get, or not get the National Foundation. This looms as a tremendous political battle, and I wondered if you could give us any of your own thoughts on this.

Dr. Valien: Well, I am not sure that there is any necessary relationship between these two types of things. The institutional grant situation, of course, is supported by the Administration in a different form than what Mrs. Green has incorporated in her own bill. Of course, she has incorporated, together with Congressman Quie, a combination of support on a per capita basis for institutional support, and Congressman Quie's part of it, of course, is being related to the support of an institution that enrolls students from needy families.

The Administration's point of view has been that with resources somewhat limited the institutional support mechanism should be tied to national objectives, and that would be, of course, somewhat on basis of giving a percentage, and the figure has been suggested as 10% of the funds given to an institution for support of financially disadvantaged students; 10% of that for institutional support rather than on a per capita basis, which may diffuse the scarce resources to the point of ineffectiveness. I do not think that has any direct relationship. I mean, people can always speculate about motives. But that is not directly related, at least in the planning, to the National Foundation.

The National Foundation has had a very interesting history because it originally came up as an innovative and change mechanism. And also one that would have some ongoing programs which would be transferred to it.

The Secretary met with a group of persons as an outcome of a meeting that was held at a American Council of Education meeting, and out of that meeting some discussion of the foundation ensued. And this led to a decision to have a larger input from the academic community on what the foundation should be like. The concept of it was modified and any intentions of having ongoing programs involved in it was abandoned. It became a new form, an innovative and change mechanism. And that is the way in which it is stated now.

Now, as far as I know, there has not been any serious or actual opposition to the foundation from the general academic community, but the general academic community which is embraced by the various groups at One DuPont Circle, generally, have been more interested in the institutional aid provision than in the foundation. However, they are not opposed to the foundation, to my knowledge.

Dr. Lipson: Joseph Lipson from the University of Illinois in Chicago.

I have not heard a clear rationale why the function and the funds of the National Higher Education Foundation should not be included in the National Institute of Education umbrella since the National Institute of Education is supposed to have a responsibility across the entire range of education that is supposed to pay attention to the interrelationships among different parts of the education establishment. So the question is: Why should not the foundation function be included in the functions of the National Institute of Education?

Valien: Well, I think that is a good question and a fair question. I think this is one of the questions that is being asked and this is one of the reasons, rather than the previous reason, why to some extent there was some opposition to the foundation in the House.

It seems to me, though, and maybe this was not too clearly delineated in the proposal for the institute, that the institute was originally proposed and still is proposed as primarily a mechanism to support basic research and development. Originally I think it was hoped that it would focused particularly on early childhood education and elementary education, and research into basic beginning processes and activities.

On the other hand, the foundation was seen as a kind of mechanism for trial and error in higher education so that if activities that were proposed for higher education could be demonstrated to be effective, they would then be transferred to an ongoing operating bureau. So that, I think, that the distinction was originally designed to be made between what might be called a basic research mechanism – the institute, which would take in particularly the National Center for Educational Research and Development – and the foundation.

It is a matter, I think, of emphasis. It is a matter of, I think, division of responsibility. The foundation is not to be a basic research support agency, but one that would support actual projects and demonstrations which would be innovative in character.

As I say, I think it is a matter of emphasis.

For example, as you know, I think there are about six or seven different groups in the area now working on innovation, change, and nontraditional study in higher education. There is the Commission on Higher Education studies. There is the Newman group that works out of the National Council of Higher Education, under Todd Furniss' direction. There is the group that is working with the American Association of State Colleges and Universities. Wayne Morse is head of that. There is a group of education which I chair, which is the Executive Steering Committee to explore exemplary innovative practice in higher education.

All of these groups are looking at new thrusts in higher education, and it seems that if these new thrusts are to be implemented and experimented with and put in the form of a demonstration project, it would be useful to have a separate mechanism project to do that rather than one that might be more interested in other areas because its original mission was in basic research. I think that is the rationale.

Report from the National Science Foundation

Joel Snow

Dr. Snow: To start the discussion this morning I will say a few words about the kinds of things that are happening at the NSF that can bear upon the interest of people concerned with graduate education and people concerned with change in graduate education.

I noted on looking at the booklet for this conference that the general theme was on the impact of change in graduate education, and I think many of the things that are happening at the National Science Foundation are both the reflection of present change and to some extent precursors to changes which we might anticipate in the near future.

Let me start by pointing out that my own job with the National Science Foundation and title are brand new. The organizational entity that I work in was invented about eight months ago. It is concerned with a new set of programs at the NSF about which there has been a good deal of discussion in the university community. And I should say in the federal community, also.

The National Science Foundation, as many of you are aware, is a federal agency with a budget this year of over $600 million, entirely devoted to strengthening science and science education in the United States.

In order to do this, it is organized into groupings of different activities, and the one I am going to spend most of my time on here is the newest one, which is headed by the Assistant Director for Research Applications.

I would comment, by the way, that the National Science Foundation as of Friday has a brand new director, who will take office on the first of February, Dr. H. Guyford Stever, who is presently the president of Carnegie-Mellon University.

The six assistant directors of the foundation each head one or another of the large area of activity.

I will touch on them briefly.

The Assistant Director for Research is responsible for the largest area of activity, including research grants almost entirely for fundamental research in all of the areas of science. This is the bell wether program area of the National Science Foundation, and it is really the core of all of the rest of our activities. It has been undergoing very substantial growth over the past few years. Part of that growth is generated by changes in the budget of other agencies, but we expect that the commitment to fundamental research of NSF is going to remain very strong and that there will be continued growth in that area.

The Assistant Director for National and International Programs is responsible for a collection of rather specialized activities that involve various kinds of special management problems. These include national centers and facilities that are used by large numbers of universities and university scientists, such as the National Center for Atmospheric Research, coordinated national and international programs, such as the programs in the Antarctic, and the research programs in the Arctic, and things of that nature. This, by the way, also includes the international exchange programs which do not involve large amounts of money, but which are, I think, quite important to the scholarly community.

The Assistant Director for Institutional Programs is, unfortunately, presiding over a dying empire. The Foundation's institutional programs, which were very substantial in past years, have shrunk to accomplishing essentially a phasing-out operation.

The Assistant Director for Education is responsible for the whole array of programs in higher education, in undergraduate education, and in precollege education, which include the Foundation's fellowship and traineeship programs, and various approaches aimed at innovative development of curriculum in the sciences.

Finally, the Assistant Director for Administration, who is responsible for housekeeping and that kind of thing.

And that leaves us with the programs under our Assistant Director for Research Applications. That is where I work, and that is where I will spend the rest of my time today.

The Assistant Director for Research Applications is primarily concerned with a new program which is called Research Applied to National Needs. I say it is a new program; it was actually started this fiscal year, Fiscal Year 1972. This was announced in about March of last year, but we have had as yet relatively little consistent effort in communicating with the scholarly community about this program, which is one of the reasons why I am here this morning.

Research Applied to National Needs is a group of scientific activities primarily concentrated in universities that are aimed at finding ways in which science and technology can be brought to bear much more effectively on the domestic problems of the nation.

Now, we have a lot of domestic problems and there are a lot of people concerned with them. There are many national problems for which science and technology will not produce much illumination, or much in the way of a useful approach for dealing with them. We are well aware of this. Nonetheless, there is also a very large number of national issues and problems that have a very high scientific and technological content. There has not heretofore been a really concerted effort to stimulate the doing of that science and technology that will really illuminate these issues and that will really provide an intellectual basis for much better decision making in the public area.

I refer to problems such as those of the environment, which receive a lot of very intensive attention these days, many of the social problems we must deal with in this nation, and stimulation of new technology to stimulate economic growth, and so forth. What I have done in mentioning these is to list the three basic foci of the program, that is, focus on environment, focus on social problems, particularly urban problems, and focus of stimulation of new beneficial technologies in areas where parts of the federal structure or private industry are failing to take hold and are failing to move forward.

In order to keep this presentation short a relatively limited spectrum of problem areas have been selected in which these new programs are concentrated. I would remind you that the main thrust of NSF still is a broad-ranging program in the support of scientific research in all areas of science, and we have not tried to develop a program of applied science that entirely spans all conceivable areas. Instead, we intend to be problem-oriented and take a few specific problems and concentrate on those.

Now, I will try to quickly enumerate a number of examples.

In the environmental area we are continuing a program that had started at NSF on weather modification. It is a very specific program trying to determine that scientific information which might lead to the implementation of technologies that influence the weather. I say "might lead," because there is a very important element that we all recognize, and that is that it is not just enough to develop new technologies and to stimulate new science, but we also must evaluate. By "we," I mean the broader community of the public and the federal government. We must evaluate whether the implementation of that new technology is good or not. So when it comes to a program of weather modification, we must also include in it the full agenda, the social impact of possible weather modification as well as cloud physics and other elements of atmospheric science that are involved.

The same kinds of things apply in the Environmental Systems program of research on trace substances in the environment. This reflects a large amount of public concern about mercury in the environment, or, a couple of years ago about lead in the environment. The latest thing recently has been a good deal of discussion of another heavy metal, cadmium, in the environment. And all other kinds of things are of concern, asbestos, polychlorinated hydrocarbons and other alphabet soup. There are all kinds of things that are being translocated in the environment because man has to take material from one place and deposit it someplace where it was not before.

In the social area, the principal emphasis, as I mentioned before, is on problems of the cities, and more particularly on how to make existing cities better serve their citizens. Despite all of the interest and excitement one could have in thinking about brand new communities or about fantastic structures that might, say, float in the sea, or be built out in unusual places, most of the physical plant that we are going to have to live in for the next 20 or 30 years is that which already exists. Our problems of living in it are not going to be rebuilding it; they are going to be in redesigning our social institutions so that the city itself is more livable for the citizens. This is an area of research that is fraught with all kinds of problems. Some of them may be quite elegant having to do with innovative concepts in programs of social welfare, and others are very mundane, that is to say, how do you pick up the garbage more efficiently?

In one project that was just completed, a group from the State University of New York at Stony Brook studied just the municipal waste problem for the City of New York. In that case an immediate saving in the order of $10 million can be identified. That is a particular form of revenue sharing, if you can support some research that saves a few million dollars in a big city.

Let me just list a few problem areas that have been picked out in the stimulation of technology and then turn to just a couple of conceptual points before starting with the questions.

The technology areas in which we have a real interest include energy problems. Energy is perceived as a major problem ever since we had a blackout about five years ago in the northeast. Program areas include energy resources, research and analysis, urban technology, earthquake engineering, which was a program area that the NSF had before in its engineering division, fire research, enzyme technology, instrumentation technology, and specific improvements in industrial processes.

This may sound like a grab bag, and to some extent it is because, as I pointed out, we are trying to select a few relatively specific problem areas where a fairly intensive burst of research would be done over a period of 5 to 10 years that would make a real difference in the area that we are speaking of.

Let me turn now to a couple of more general points.

The change in the federal support of science at least is something that has been quite misperceived. All that I read in the professional publications that I receive (and I get the usual flood of mail that anybody else gets) is pretty gloomy. But I think this gloom is very much misplaced. I do not think we are going to be seeing less federal support, at least in the sciences. Even the National Endowment for the Arts and Humanities, has been doing a lot better than the sciences over the last couple of years. And I think that is a very encouraging and impressive situation.

I do not think we are going to see less support for research of this sort, we are going to see more.

On the other hand, that more is going to tend to be focused in specific areas that correspond to national objectives rather than generalized across-the-board types of programs. This is an evolution that has taken place in the federal perception of higher education. That is, rather than providing various kinds of block support and letting the education system structure itself as it wishes, the federal government, which is required to be responsive to the taxpayers' needs, should develop some structure in the way support is provided.

The Rann program is typical of that kind of situation. Here a few areas that correspond to national needs are selected after fairly exhaustive analyses, and then research money is programmed into those areas.

Now, if this were done across the board, in basic physics, in higher mathematics, the result would be nonsense, because only a very blind individual would believe that pure science can be so intimately related to the short-term national objectives I was referring to.

But NSF is not doing that. The fundamental research programs of the foundation are being explicitly sheltered from this kind of organization. It is the add-on programs, the new programs that are categorical.

Another example is the conquest of cancer program. Rather than have a generalized increase in support in biomedical research, the Administration and the Congress are developing, a very strong emphasis on cancer. This is again another example of a move toward categorical research support as distinct from generalized, discipline or institutional research support.

Nonetheless, while this requires a moderate degree of adjustment in some areas, we can be confident that the total research funding is going to keep going up, and, I think, that should be encouraging to everybody.

I will make a couple of final comments now about the way in which our program of research applied to national needs is likely to influence or underline present trends on the campus.

I first should point out what kind of resources are involved. The program went into the Congress for some $81 million, and actually came out after the budget cycle was complete with about $56 million. It is not all new money since there was a substantial program in existence in the previous years, but the increase in new money has, from our standpoint, the kind of flexibility that was needed.

We have retained in the concept of this program an ability for certain limited kinds of institutional support, though I use that term with some trepidation because it is an unpopular term in some political circles. What we mean here is providing the resources to develop a nationally needed research capability where that capability does not previously exist. We engaged in some of these ventures even last year by making some quite sizable grants to start research groups who are interested in environmental problems, including sizable ones at the University of Wisconsin, at Cal Tech, and some other institutions.

As you recall, I mentioned that energy is a principal research area, and we made two sizable grants to the University of Pennsylvania to support essentially the full development of a research center on energy and power.

Now, we do not expect to do this across-the-board, but if it becomes clear that the institutional infrastructure for carrying out the various pieces of our program are not in place, then we will be working very hard to encourage people to come in with proposals to create that institutional infrastructure.

Another type of institutional consideration is that many of the problems that need to be addressed are too broad for any one institution to cope with. They may involve a range of professional skills or scientific skills that the institution does not have, or they may involve a need to take research data that goes beyond the resources at the individual institution.

Thus, we are encouraging, very strongly, the formation of joint ventures between different universities, between universities and smaller schools; between universities and industry, if the situation warrants it. In every case, the guideline is a very simple one: an objective is to find a job that is really worth doing and then put together the pieces that you need to succeed in getting that job done. And we are totally open and flexible toward such arrangements.

It is also true that we retain in our own program a very strong orientation toward and an appreciation for the importance of higher education, particularly of graduate education.

My own Ph.D. was in physics at Washington University in St. Louis, and most of our staff are Ph.D. scientists with extensive teaching experience and sympathy for higher education.

One of the things that is quite evident is that in these national need areas new education programs are being developed, including Ph.D. programs in some instances and in other instances master's degree programs. I do not think it is just a fad. Three or four years ago I was at the University of Illinois and we were starting some interdisciplinary seminars and courses on environmental problems. At that time there were many people on campus who were saying that the environment was just a fad; that this is not going to last. I think they were wrong. We are always going to have that environment, and with our increasing technology and intensive society we are going to continue to be stressing that environment. Research and educational programs that deal with the issues involved are here to stay. And, actually, they have been here for a long time, but they were called "sanitary engineering" and "ecology," nobody thought they were so very elegant.

There is developing a whole new range of new courses and new educational programs, and it is a welcome evolution as long as we retain the fundamental scholarly orientation of higher education. It would be very bad to stimulate activities on the campus that would distort universities from their fundamental purpose. The feeling in our group at the Foundation is that rather than do that, we would prefer to support some of this research in university-related institutions, such as institutes that are coupled to a university, rather than have too applied and too pragmatic a sort of research stimulated on campus in ways that might distort values.

Finally, what we are trying to encourage in RANN is explicit coupling of the programs of research to some community of uses. In the case of an engineering activity, the user might be an industrial association, or a group of industries. In the case of much of the environmental research, the user might be the state regulatory agencies or local regulatory agencies, local public health agencies, or any of a number of such practitioners who need the information that is being developed. After all, the real test of relevance is whether anybody wants to listen to you and wants to have the data that you produce when you have done your job.

Now, this is a reciprocal situation because we have seen grow up the phenomenon that supply creates its own demand. Supply of information creates demand for more. Already we have seen that encouraging this coupling between users can stimulate that user to turn around and ask deeper questions and to turn around and provide resources to expand some of the programs that we have started.

In a sense, it is a continuation of the extension concept in which the university's public service function has historically played a major role, but it is an extension of a program to a much broader kind of community than the agricultural community or the traditional adult education extension programs.

Rather, it is an extension program in which, one tries broadly to do what you can to use the resources of the universities to help improve the communities, the regions, and the states that we live in. This is something that touches a sensitive spot with a large number of students and also a large number of faculty.

The concept also may contain the possible seeds of a new basis for stability and support for institutions of higher education.

In the end, of course, state institutions are partly supported by the resources of the state taxpayers, but it has been relatively rare that there has been strong support and a strong degree of stability in support with local institutions and local government or local organizations and so forth.

If the university proves itself to be a very useful and practical citizen as well as a prestigious and intellectual citizen in the community, there may be a very good basis for very much strengthening the resources that the community will make available to the university.

While I do not have any program or any philosophy to really push on this, I think that it is a point that ought not to be missed.

Discussion

Voice: I wonder if you could tell us just briefly what is the rationale with respect to the relationship between the research application and the continuing basis in the physics, chemistry, math, biology, etc.? I think this becomes so prevalent in fields like environment, and also weather modifications which have moved upstairs from atmospheric sciences. How do you stake out territory with respect to the base, which I think is so obvious, and must be continued to be related?

Dr. Snow: We hope it will be a steady and vigorous flow from fundamental knowledge to useful and practical applications. There has been a certain degree of, I guess you could call it, fundamental science immunity from quite a range of practical applications, and it is partly because nobody has really had the job given to him of promoting that kind contacts.

Now, in the case of weather modification, this has not been true. Weather modification in a sense is the best working model we have of what our categorical programs ought to look like. It has some fundamental science in it. It is coupled very closely on a day-to-day proposal basis with the Atmospheric Science Section. As well as being related to programs of atmospheric sciences, it is also related to ocean and atmospheric research that the foundation supports. It has had some relatively pragmatic objectives that have led to the support and stimulation of applications oriented projects which we try to sequence or relate to one another, so that they make some kind of a rational mosaic.

I guess I have to say the weather modifications is a good example of how we hope all of our programs will look, say, three years hence.

Dr. Gordon: Gordon, from the University of Notre Dame.

I am a little bewildered, and I am sure some of my colleagues in this room are a little bewildered, that for these last eight months the director of the NSF says that the means of support of graduate students and universities would be as research students on the classical research budgets in NSF. Apparently we hear this better than those who are in more geographical proximity to the director, namely, the program director, because we do not see the implementation of that policy in support of graduate students.

I wonder if you would like to comment on that.

Snow: Well, I suppose the interpretation that I get from what you say is that while the NSF is continuing to make research grants, it is not increasing the ratio of students to faculty in those grants, and that is probably true, although I have not really looked closely at the overall statistics of the research directorate.

I think the way Dr. McElroy's views on this ought to be interpreted is that we do see a continuous growth of the research budget and that will actually mean that more students in toto will be supported. I do not think that when you actually look at the numbers, that the number of students that will be supported by the increased research funds will be quite as great as the number of students that formerly were supported in traineeship and fellowship programs that have been reduced or phased out. But then when you add in the research applications programs which also support students that is add-on money that otherwise would not have been there.

My rough estimate is that this year we will support about 1,250 graduate students that otherwise would not have been supported.

Now, that is small compared to the half million graduate students that in total are in all of your institutions; but it is new money and it is again partly a replacement.

Dr. Wolverton: Bob Wolverton from Miami.

I am sure you cannot have any guarantee, but do you have a feeling that the RANN program and others may be eventually free from the OMB, and what happened this year with the loss of Lloyd Humphries and others?

Snow: I think as long as the agencies of the federal government have to be responsive to the President of the United States there will be something like the OMB. The President has to have a staff office that acts as a switchyard for all of the budget proposals that are brought before it. It is true that in the area of support of science and education the OMB has played a much more vigorous role than was obvious in the past. I think the extent of that participation will fluctuate depending upon the Administration that has control of the White House. It is just impossible to predict how that relationship will change.

I am convinced, however, that those gentlemen in the end are very reasonable gentlemen. It is their responsibility to try to put together the best program for the Nation that they can, given all the constraints that they have to deal with, and if persuasive arguments can be presented to them, they will respond to them.

I think one of the things that hurt the education community the most was an overreaction to the Ph.D. oversupply problem with perhaps insufficient recognition that new national needs and requirements will call for a lot more highly trained people. And we need more highly trained people in this country, not less. We do need to solve problems as to how to, in a sense, route them to the right parts of our society. And we do have to recognize that large increases in numbers of people must be destined for roles in society that are not those of academic scholarship. Once you go through that chain of argument you can see that a very good case can probably be made for new programs of education at the sub-Ph.D. level, where the people are receiving a high level of training for important nonscholarly roles.

I think arguments about new educational program emphases like that will, in the end, be seen sympathetically by the people in the White House.

Business Meeting

Stephen Spurr

The agenda for the business meeting is for the chairman's report to be followed by the committee reports, and then resolutions, election of members of the executive committee, amendments to the constitution, new business, discussion of the next meeting, and then finally, under the chairman-elect, an open discussion of matters that pertain to the forthcoming year.

For my part, I hardly need to tell you that the past year in graduate education has been one of doubt and concern, one of rhetoric, not always buttressed by fact. Not for years have we so questioned the validity of our professional goals and direction. Not for years have we questioned so the ways and means we have been using to attain them. At such a time as this the role of the professional association becomes critically important.

I am confident that the Council of Graduate Schools in the United States under the leadership of Dr. J. Boyd Page is and will continue to provide basic data, reason to discussion, and applied common sense to aid in the solution of the problems besetting graduate education, and to keeping us informed as indeed we have been year after year.

At the risk of being repetitive this late in the annual meeting, let me review briefly our progress for the past year as seen from a somewhat detached position, and the developmental program currently underway.

First of all, the difficult transition of replacing an irreplacable founding president has been accomplished. Gus Arlt brought us into being and he brought us through adolescence. Boyd Page has been building for the future for research and background in graduate administration. There remains a major need for the expansion of our staff capabilities. Fortunately, CGS is in reasonably good shape financially. In the belief that a vacuum exists in national graduate leadership, and in the belief that our CGS is the appropriate organization to provide this needed leadership, your executive committee has approved a budget permitting the employment of a second professional staff individual.

We are already recruiting such a person. This may mean that it may be a small operating deficit in 1972, but we do have a reserve and we do anticipate that our grant-gathering ability will be sufficiently enhanced to permit a balanced operation at a higher level of activity in the future. In any event, we cannot provide the needed leadership unless we make the move.

We believe that we have already made one move in opening up the problem of costs of graduate education. The graduate cost study financed by the National Science Foundation is now essentially complete. Under the joint sponsorship of CGS and the National Association of College and Business Offices, its staff and the University of Washington has completed both an annotated bibliography and a survey and analysis of the literature. CGS leaders, Joe McCarthy and Dave Deener, have reported a commentary with recommendations which puts the matter into an appropriate academic prospective. CGS will publish these papers early in 1972 and we will shortly have a brief report from Dave Deener. The Graduate Record Examination Board, which in itself is a joint venture of CGS and the Association of Graduate Schools sets policy and administers the Graduate Record Examination through the contractual arrangement with the Educational Testing Service.

We have cooperated on a number of important projects which substantially increase the impact of both organizations. These include, first, a survey of enrollment this fall, which provides early data on numbers and trends in our graduate schools, and Boyd Page has told me that he has checked with Dick Burns from ETS and they believe we can have the final corrected figures available in the mail early next week. The reason they were not distributed at this time, despite the importance of the figures, was the fact that there were a few final checks and a few final changes needed to be made.

A second joint project has to be to publish an annual set of manuals detailing available graduate school programs and admissions requirements. This project is well underway.

And, third, the establishment of a panel on alternative approaches to graduate education to parallel and complement the Commission on Nontraditional Study. We appreciate such a partnership, especially when our partner picks up the check.

Coming now to housekeeping, a number of the membership, including the members of the Executive Committee, have long been concerned that the Executive Committee is a self-made perpetuating body in that the Executive Committee not only chooses its own chairman, but also chooses and nominates its successor members. I say that this is a fault clearly recognized despite the fact that an analysis of the appointments to the executive committee over the years will indicate that new blood has been constantly sought, that this new blood has come from a wide range of the country goegraphically, that this new blood has come from a wide range or type of institutions, and that it has involved a wide range of types of institutions as well as individuals. And so despite the self-renewing character of the Executive Committee, it has not reproduced itself homogeneously, in fact. But nonetheless we have encouraged the Committee on Policies, Plans, and Resolutions. I cannot remember what CPPR stands for, something "Pacific Railroad," but it has come up with methods for selection of the Executive Committee. But as Mina Rees told you yesterday, we have a constitutional amendment to propose that will provide for election of a separate Nominating Committee, and the use of this Nominating Committee to develop a panel of new members of the Executive Committee.

Another developmental change this last year was the floating of the summer workshop for new graduate deans on its own bottom. Up to last year we were funded by the grant from the Danforth Foundation and we had a number of very successful workshops for new graduate deans. Our money ran out, but not our appetite, and through the cooperation of Dartmouth College, through the contributed services of the members of the Executive Committee as consultants, and as workshop leaders, without honorarium, and traveling essentially at their own expense, and through the willingness of a large number of new graduate deans to attend the meeting at their own expense, we were able to run a most successful, I think, workshop at Dartmouth College in most pleasant and amiable circumstances. And I think now we can be assured that we will be able to continue summer workshops. Indeed, the Executive Committee is hopefully twisting the arms of several of our Rocky Mountain and Far Western deans, and we are hoping that we can find as pleasant a place as Dartmouth College for next summer's program.

On a matter of considerable controversy, the Doctor of Arts degree, the Council of Graduate Schools has, I believe, provided effective leadership. We sought and obtained a grant from the Carnegie Corporation to put on a national conference on the Doctor of Arts degree in Wisconsin, which was held this year, and which I think did a good deal to crystallize thinking as to the essential requirements for a strong Doctor of Arts program.

We took the position that regardless of whether we individually thought the Doctor of Arts was a good thing or not; that it was clearly something that was with us and that we had to provide effective leadership. Out of this workshop, and on its own, our committee on the training of college teachers chaired by our exchairman, Alvin Proctor, has developed, as you know, a new supplemental statement on the Doctor of Arts degree called "supplemental," because it is additive rather than supplementive of our original published statement on the Doctor of Arts degree. And we now have a statement of this group calling for a Doctor of Arts degree of enforced standards, which I think will go far to insure that there is strength in the new Doctor of Arts programs that are coming along.

Most of us who have been concerned with this movement are ambivalent in that we believe that the development of a new degree title can stimulate innovation; but at the same time we fear that the development of a new degree creates dangers of inflation and dilution.

How to steer our way between these dangerous rocks is a difficult one because clearly there is a place for innovation and change in our doctoral programs. Clearly in some instances this innovation and change can be stimulated through the making available of a new type of degree which identifies a new type of program. And clearly it is a great danger that people at institutions will look upon this as a safety valve or as an escape valve to permit them to do things that probably should not be done. And institutions that should not probably be doing them, and at standards that should be higher. But nonetheless, I think the CGS has played an effective and responsible role in saying that if a Doctor of Arts program is to be instituted, these are the considerations the institution should bear in mind.

I would hope that in the future CGS deans will pay more attention to the complex problem of the doctorate degree. Everything that has been said has been said many times over with regard to the Ph.D., its strengths and its weaknesses. I think any study of CGS or AGS programs will show that the programs remain unchanged year after year. The comments remain unchanged. Only the personnel change. So that the fact is that most of our tours of duties as graduate deans is very short. It is something of a shock to realize that two-thirds of the CGS graduate deans have been in office two years or less. But this justifies the fact that we can tape our program without having to provide live speakers and still perform a substantial part of our function. But nonetheless I would like to suggest to you that in your future considerations we give serious consideration to whether or not we should not have two levels of doctorates.

My own work on the subject leads me to suggest that the core of our continuing argument on the Ph.D. and/or the Doctor of Arts, and/or any other doctoral degree, lies in the fact that we expect the same degree both to certify qualification for beginning professional employment and certification of approvement of established scholars. The fact is, you cannot do both. In almost every major country in the Western World, except the North American countries, two levels of recognition at the advanced postbaccalaureate stage never exist. This has been generally involved throughout Western Europe, in which there is one level of certification for a young scholar completing his formal education and his residence as a new student and ready to accept his first professional assignment. And the certification of the advanced scholar who has produced, who has demonstrated an ability for continued independent thinking in scholarship, and who is ready to take a permanent post in a major research or university capacity.

So I would suggest to you that regardless of what they are called, regardless of semantics, regardless of qualifications, that there is justification in two levels of recognition at the advanced postbaccalaureate level. In concluding, let me summarize the state of graduate education by suggesting that it is neither as good as its defenders hold, nor as bad as its detractors complain. I point out to you the recent ACE survey which suggests to me, at least, the level of static and the height of the peaks are about normal, about what we have had in years past, about what we can expect, and also represent a reasonably healthy, if not a vigorous state of activity.

Let me call attention again to the statistics produced by GRE and CGS, that despite an 11% decline in the number of fellowships held this last year, despite a 2% decline in the number of assistantships held this last year, there has been a 1% increase in the total number of graduate students. From this I think we can gain some confidence that the disappearance of the free ride is not as critical as it had been presumed by many of us.

We can conclude that financial aid on a need basis in graduate school is a very real possibility and that the experience of our colleagues in medicine and law, where this has prevailed for years, can be drawn upon in developing more realistic financial aid programs for our graduate students in the future. And this includes the fact that expanded loan programs in graduate school studies also are a real possibility. And so I suggest to you that the mood of the day should be that we should quit crying "wolf." The future will be better than our fears, if not up to our hopes. Let us get on with our job.

Committee Reports

Now, we will go through the committee reports and urge each committee chairman to say as much as he wants as long as he says it briefly and concisely.

I would like to report one specific action of the Executive Committee, that yesterday that it admitted two new institutions, Western Kentucky University and Wright State University in Dayton, Ohio. This brings our membership to an even and convenient 300.

The next committee is the Committee on Policies, Plans, and Resolutions. This has been a very active committee under Mike Pelczar of the University of Maryland.

REPORT OF THE COMMITTEE ON POLICIES, PLANS, AND RESOLUTIONS

Dr. Pelczar: I would like to touch on the topics that have been discussed by the committee. The ideas that are raised in the committee are communicated with the Executive Committee. Since we have met mostly in Washington, we have had access to Boyd Page so that we can both get information from him and provide him with some of our thinking.

Number one, the matter of elections for the Executive Committee, which you have heard about; recommendations regarding staff meetings with the CGS officers; recommendations regarding CGS on the matter of the involvement in leadership; and the program on Thursday evening stemmed from some of our concern in this direction.

Joe McCarthy, I think, has mentioned that this morning, but lest that be overlooked, his contribution on the National Planning Council for Graduate Schools came out as a result of some of our discussion on that. We are currently deliberating on the committee structure, and hopefully we will be moving into some consensus on recommending a smaller number of committees and a more consistent and precise method of reporting on committees to the Council prior to this meeting. And we have also discussed the subject of a consulting service, which is provided by CGS.

Mr. Chairman, that constitutes the report from CPPR.

REPORT FROM THE GRADUATE RECORD EXAMINATIONS BOARD

S. D. Shirley Spragg: As CGS members are aware, the Graduate Record Examinations Board was created in 1966 in affiliation with the Council of Graduate Schools and the Association of Graduate Schools. It was charged initially with responsibility for the general policies of the GRE Program and subsequently accepted similar responsibility for the Graduate School Foreign Language Tests. The board's basic responsibilities are to insure that these testing programs and other activities initiated by it are conducted in the best interests of graduate education, the students, and the institutions. The board is made up of 16 members, 4 appointed by CGS, 4 by AGS and the remaining 8 elected by the board itself. At present 13 of its 16 members are members of CGS.

Joint Activities with CGS

In developing a program of services and activities for graduate education the GRE Board has defined its responsibilities broadly and, while maintaining a primary concern for the tests for which it is responsible, it has been increasingly concerned with a number of broad problems of graduate education. This past year has seen the development of several important activities on a cooperative basis with the Council of Graduate Schools. These activities in general have been nontest related. They have usually followed the pattern of GRE Board financial support with ETS staff effort, with the cooperation, advice and endorsement of CGS. Thus it seems appropriate to describe first three major GRE Board activities which are jointly sponsored with CGS and, hence, perhaps of most interest to the CGS membership.

1. **Panel on alternate approaches to graduate education**. The GRE Board and the Council of Graduate Schools Executive Committees have agreed to sponsor jointly a Panel on Alternate Approaches to Graduate Education. The President of CGS has agreed to serve as chairman of the panel and staff support will be provided by the ETS-GRE Program staff. A 10-member panel is currently being appointed. It is anticipated that the panel will over the next 18 months explore the possibilities for nontraditional study and the awarding of external degrees at the graduate level. The panel is expected to issue a report with recommendations as a result of its investigations and deliberations. The work of the panel will be coordinated with that of the Commission on Nontraditional Study sponsored by the College Board and ETS. It is anticipated that the work of the commission will focus largely on undergraduate nontraditional education.

2. **Graduate programs and admissions manual**. To meet the need for an up-to-date, economical, student-oriented publication on graduate programs and admissions, the GRE Board and CGS have agreed to sponsor jointly the creation of a publication to be entitled: *Graduate Programs and Admissions Manual.* An editorial board with George Springer of the University of New Mexico as chairman will plan and determine policies for the publication. The manual will be organized by graduate programs and will be structured to provide a maximum of basic information for potential graduate students and counselors. The publication will be made available at a nominal cost to students.

This project promises to be a most significant one, both for CGS and the GRE Board. It will provide the graduate programs of all accredited institutions an opportunity to present basic information about their offerings and admissions requirements in a document that will be readily available to and usable by students. It should result in improved self-selection on the part of students applying to graduate institutions. The success of the project will depend on the active support and assistance of every graduate dean. Very shortly ETS will be asking each dean for his help in obtaining necessary data from the graduate school and from each graduate department and program. It is certainly to a department's own self-interest to provide this information. The deans will be asked to coordinate the collection and return of data to ETS. Thus the degree of success of the project will depend squarely on the cooperation of every graduate dean.

3. Annual enrollment survey. President Page has already referred in his report to the results of another cooperative activity, the CGS-GRE Board Annual Graduate School Enrollment Survey. No attempt will be made to review the results here since Dr. Page has already summarized them and a detailed report will shortly be mailed to each CGS dean. We do wish to express appreciation for the excellent cooperation of the deans and their staffs. The overall response rate to this questionnaire was an amazing 93%, almost unheard of for a survey, which is an indication of the importance placed on this activity by the CGS membership.

It is the intention of CGS and the GRE Board to make this an annual activity and to continue to report the results at the annual meetings. However, the form and procedures employed will be reviewed carefully. We are aware, for example, that a small delay in timing might have produced answers to more questions, and that some of the questions which require breakdowns of data might not be available this early at some institutions. The GRE program staff at ETS would welcome comments and suggestions from the deans concerning this survey.

Conference of Chairmen of Graduate and Professional Testing Programs

The major testing programs at the graduate and professional school level face a number of similar problems and engage in many of the same types of activity. During the past year, it was decided to assemble the chairmen of the three graduate and professional level testing programs served by ETS, together with a few additional representatives from each policy-making organization, to discuss activities and plans of the respective programs and to explore possible areas of cooperative action. The three programs represented were the Admissions Test for Graduate Study in Business, the Law School Admissions Test, and the Graduate Record Examinations.

The conference met twice during the past year and discussed a number of topics, among them the possibility of cooperation on counseling and other types of assistance to undergraduates at the time they are making decisions about postbaccalaureate study, ways of obtaining better information about undergraduate grading systems, the flow of students into various fields of graduate and professional study and the necessary academic and financial support. In addition, there was extended discussion of philosophies and procedures governing the award of financial aid. This led to a third meeting which, with its further developments, is described in the immediately following section, which included representatives of the three programs named above plus the Association of American Medical Colleges and the College Scholarship Service Assembly of the College Board.

Graduate and Professional Financial Aid Council

At the first meeting of the five groups mentioned above, it was agreed that there was a need to consider a common approach to the awarding of financial aid based on need, and the group decided to constitute itself a Graduate and Professional Financial Aid Council with the purpose of exploring the extent to which common approaches, principles and guidelines could be developed as a basis for awarding financial aid at the graduate and professional level and, further, the extent to which general agreements on policies would permit the development of common systems, forms, and procedures for awarding financial aid when need is a criterion. This group has now met twice and a smaller task force has been appointed to work with the ETS staff in attempting to create a common form and procedures to be used in the assessment of financial need.

The GRE Board is well aware that traditionally the awarding of financial aid to graduate students has been based largely or entirely on consideration of merit. By participating in this joint effort it is not attempting in any way to set up policies which an individual graduate school is obliged to follow. However, the board feels that because of recent and impending government actions, particularly with respect to loan funds and perhaps also in connection with certain proposed fellowship programs, need may in the near future become a much more significant factor in the awarding of financial aid than it has been in the past. In such a situation it is important that the graduate education community have a voice in the creation and the nature of any system or set of forms and procedures which might be used with respect to graduate students and graduate schools. There are some indications that if the graduate and professional school community does not develop such procedures on their own, some system not of their own design may be imposed on them. In any event, if this activity produces a common system, it will be the voluntary choice of individual institutions to decide whether to use it and if so, how. Such a system will simply provide an orderly assembly and some reduction of data and a projection of need; the final decision about the awarding of financial aid and the amount of aid will of course be up to the institution. Dr. Page, Dean Pelczar, Dean Spragg, and Dean Taylor are the GRE Board representatives on this Council.

Activities Concerning Minority Group Students

Recognizing the concern of graduate schools to improve the accessibility of graduate study to students from ethnic minority groups, the GRE Board has undertaken a number of activities, especially within the past year, in an attempt to respond more clearly to this need.

Several research projects are presently underway to determine the specific responses of black students on GRE test items in contrast to white students, in an effort to determine whether and in what ways test items should be modified. Other research seeks to compare the validity of the GRE for black and for white students. Still other studies in this area are being developed. Action programs to help minority students, an area in which the board feels that immediate progress can be made, include a program of free administration of the GRE at predominantly black institutions, and of fee waivers for financially disadvantaged students. The purpose in each program is to remove the test fee as a barrier to consideration of graduate work.

A publication is being developed primarily for the use of college freshmen and sophomores of minority background which will attempt to describe a number of graduate programs and the kind of prerequisites the students must have to enter them. The goal is to develop in the students an early interest in possible graduate study and to alert them to the requirements. We hope that this publication will be available early next year.

Other activities might be briefly mentioned such as explorations of the feasibility of developing some kind of counseling-recruiting clearinghouse for prospective black graduate students and, through the efforts of minority group staff members at ETS, an intensifying of contacts with minority communities' concerns and activities in order to facilitate the GRE Board's responses to needs in this area.

Research Activities

As previous annual reports have indicated, the GRE Board is continuing and expending a sizable research effort directed at a number of important areas covered by its research policies. A major effort in this program is related to attempts to improve the assessment of the validity of the GRE tests by identifying and evaluating criteria which may be more important as measures of success in graduate study than grades, in seeking ways to make test results more meaningful and useful by exploring background data of students which may enhance the predictive power of the tests, in psychometric investigations to improve the usefulness of the tests themselves, and through basic theoretical studies of new approaches to the assessment of validity which may overcome some of the problems inherent in validity studies at the graduate school level. Such research includes a study of critical incidents in a student's performance as a graduate student which lead to a faculty members' evaluation of him as a student. One study, being conducted jointly with the Office of Scientific Personnel, will utilize data available in that organization's doctoral file. Another study is seeking through a biographical inventory to develop information which may be relevant to the assessment of motivation.

Finally, mention should be made of a major research project underway in cooperation with the Law School Admissions Test Council and the Association of American Medical Colleges that involves an extensive survey of college seniors in an effort to gather data on decision processes which lead students into various fields of postbaccalaureate education, to describe the characteristics of students choosing different fields, as well as of those students who decide not to pursue postbaccalaureate studies, and also to learn something of the attitudes of students toward their undergraduate experiences. Data on the first phase of the project have been collected and are being analyzed. In the spring of 1972, a second questionnaire will be sent to the same students to determine, among other things, the ways in which their stated plans concerning postbaccalaureate study have been fulfilled, how satisfied they are at present with their situation, and their reactions to graduate and professional school admissions procedures.

Graduate School Foreign Language Tests

Nearing completion and publication is a major research project that relates to the Graduate School Foreign Language Testing Program. This project surveyed some 11,000 doctoral recipients over the 10-year period 1959-69 with respect to their use of a foreign language either during graduate study or after receiving the doctoral degree. The study will present overall data as well as data by 18 major fields of graduate study. We believe that the study is comprehensive and timely and will be of great interest to the graduate community. The report should be available sometime in February 1972 and all CGS deans will receive a complimentary copy.

DISCUSSION

Dr. Macmillan: Macmillian, Vermont. I am cognizant of the discourse that we had last evening on timing. I am cognizant of the problems that I have faced for financial aid for my practice during this next fall. I am aware that it is going to become better. I am aware that we are facing budgetary problems with our legislature. We are going to have rebuilding budget for 1974 before your suggested date of delivery of your report on financial aid.

I would suggest that if you get your report out in late summer of 1972 that this report may well not be useful to many of us for the admission of students in the fall of 1973. Is there any way that your study on financial need and loans can be hastened so that it would be of value to us sooner?

Spragg: Yes. An announcement concerning the general nature of the time for a really intensive effort. As a matter of fact, the meeting of this task force group, which was earlier scheduled for late in December, is now scheduled for next Monday, in an effort just to speed things up as much as possible.

I would like to recognize Dr. Burns of ETS, who, I think, has a comment on this.

Dr. Burns: Yes. The plan is to come out with an announcement and some substantive documentation in March as a result of the action of this Council. The actual form with which to work may not be available until the summer, but I think, we should know what this group is going to have to offer, if anything, if they can work out the problem by sometime in March. I think the group is aware of that problem and is trying very hard and working on it immediately trying to get it out, because there is a great deal of interest in this problem. If it is going to be useful, it has got to be ready in time.

Dr. Spragg: Yes. An announcement concerning the general nature of the project can certainly be made in the spring, but I think it is still true that the actual forms and procedures will probably be late summer.

Dr. Newell: I gather that the answer to my question was, no, you really have not had a chance to look at the problems of women's financial needs. I wonder, since you are going to be using the report immediately, whether it would not be possible to include some viewpoint from this substantial portion of the adult community that is asking about it.

We will look particularly, as I say, to the problem of part-time students. Certainly this is an area where if we are going to have substantial guidelines, we need to do very severe thinking. It is not an overall problem for past practice. I think we do need some new faces.

Spragg: I think I would have to say this committee has not engaged in sex discrimination. We have felt that substantial need is substantial need, whether it is by a young man or a young woman. I recognize your statement that sometimes the situation may be different. Perhaps the proposed federal fellowships for students who have financial need or who come from financially disadvantaged backgrounds might be interpreted to include the particular kind of financial disadvantagement that you are referring to.

Dr. Spurr: I think that what we will do on the formal action on these committees, if it is acceptable to you, is we will entertain a single motion at the end to accept all of the reports, but if any individual member, any voting member of CGS wishes a separate vote of any individual committee, we shall separate out that particular committee and vote on it independently.

COMMITTEE ON EVALUATION AND GRADING

Dr. Sparks: The substance of our work this year was contained in a letter we sent to each of you along with a staff study from ETS on literature in grading and evaluation and a study prepared under the auspices of the American Association of College Registrars and Admissions Officers. We asked you in that letter for any copies of statements or standard letters that you use in response to inquiries about what nontraditional grading might mean for admission to graduate school. We received about one-third of the replies that we had hoped to, and until we receive a better percentage than that, we will not proceed with drafting the statement that we had hoped to draft. We will be bringing to you sometime during the spring in the mail a kind of statement that we would like you to respond to. Our goal is to tell it like it is, to faculties, to prospective students, what the adoption of the utilization of approved methods of nontraditional grading would mean when they seek admission to graduate school.

It may not be possible for us to agree on a statement. We are not trying to set policy. We are trying only to inform several constituencies who are vitally concerned about how nontraditional grading will affect admissions policies. We will continue to work and, hopefully, have a mailed report to you during the spring.

REPORT OF THE COMMITTEE ON RESEARCH

Dr. McGrath: As we talked about what our committee might do that would be helpful, it did seem to us that perhaps the preparation of some position papers or statements on the role of research in graduate education and in universities might be very helpful, particularly at this time when so many of the public seem to think that research is a lot of nonsense, and it is getting in the way of what the universities should be doing, namely, teaching. And so we prepared a statement which you have, which is entitled, if you picked it up on the first day of the meeting, out at the registration desk, "Questions Relating to Research, Graduate Education, and Societal Needs," which we thought possibly that the office of the Council of Graduate Schools might be able to use in some way or another.

We prepared another paper which you do not have, which is titled, "Research and the Universities." And that was addressed to another public, namely, the reading public.

I did not mean that quite the way it sounded. I was going to say "the ones who read the Sunday newspapers," and that kind of thing, the educational columns in the newspapers. However, we have gone out with a different outlet for that. We have submitted it for possible publication in the Journal of Higher Education.

The third document you have, if you picked it up the other day, is entitled, "Research in Education." And we prepared this with the idea that just possibly the Council of Graduate Schools might want to make a brochure out of this or a document of a modified nature.

It occurred to us that while the Council of Graduate Schools has six or seven brochures on this or that, which we have found to be very helpful, it did not have a brochure on: research and graduate education.

It has been submitted to the chairman, to the president, to the Executive Committee, and we hope that they will see fit to use it as a brochure, probably with modification, and if modification is desired, we would be glad to help in that as directed.

One more thing before I stop, and that is that we think that if this committee is considered to be useful to Council of Graduate Schools, that it ought to be expanded so as to have a greater variety of input. At the present time it has only three members, and they happen to be two physicists and one electrical engineer, so that as you read these documents, if you think they seem to have a certain cast, why, you are probably right.

REPORT OF THE COMMITTEE ON DISADVANTAGED STUDENTS

Dr. Lively: At the meeting last year I announced that this committee had determined that a survey of practices and programs available to disadvantaged students in the graduate schools of the country would be our primary task. This is in the nature of a progress report during the past year while we have worked through several drafts of a questionnaire.

We now have one which we think contains the essential ingredients and are meditating on it to determine any possible improved wording, omissions, redundancies, etc. We also requested that the Executive Committee consider that this questionnaire be cosponsored with the GRE Board, and we have also talked with a representative of the GRE Board for exploration in that direction. If this possibility materializes, we hope to have a questionnaire distributed sometime during the spring.

REPORT OF THE COMMITTEE ON THE COST OF GRADUATE EDUCATION

Dr. Deener: Two documents are virtually in print, and we are trying to being together is the last summer report with commentary. All three of these documents, a copy of them, will be sent to each graduate dean and a copy will be sent to each business officer in a university graduate school. Additional copies will be available through CGS. I think they will be for sale.

As a result of some things that have happened since yesterday morning, we have a timetable which looks as though we will have a revised draft and hope to have a meeting with our colleagues. We may possibly get agreement early in January. I think yesterday's session was very useful from that point of view.

The Executive Committee has endorsed in principle the substance of what we are trying to do. At a later time in the meeting, I will present a resolution to you concerning one aspect of the graduate cost study.

Dr. Spurr: The Chair will entertain a motion to accept all of the committee reports that have been presented.

Moved and second.

Second.

Dr. Michael J. Pelczar, Jr.
Committee on Policies, Plans, and Resolutions
December 4, 1971

RESOLUTION

Whereas, in the long-range view of national needs, highly trained personnel must be provided in meeting real problems of society concerned with environment, transportation, poverty, urban renewal, population, changing technologies, international relationships, and other areas,

Whereas, graduate schools must continue to make major contribution in the professional preparation of talented individuals in the creative and performing arts and traditional humanistic studies in addition to the basic sciences whether or not these contributions are perceived by society,

Whereas, any major interruption in consistent support of graduate and professional education will result in the deterioration of the national capacity to maintain the education and training of personnel at the highest level,

Whereas, graduate schools are developing new approaches and structures directed toward the preparation of graduates qualified to cope with the increasingly complex needs of contemporary society,

And whereas, the Council of Graduate Schools in the United States views as a disservice to the long-range public interest the uninformed and the often exaggerated emphasis on the increasing number of Ph.D. degree holders in the United States,

BE IT RESOLVED, THEREFORE, that the Council of Graduate Schools, through its national office and membership, make every effort to impress upon society the readiness and capability of graduate schools in the United States to respond to perceived needs in proportion to the support provided by society.

Mr. Chairman, I move this resolution be adopted.

Dr. Spurr: We have a motion from the Resolutions Committee. Do you wish to give us a background on the reasons for this resolution at this time?

Dr. Pelczar: Yes. We feel that one of the very major obstacles or handicaps to promoting the best interest of graduate education has been this sort of unqualified large public headline or off-the-cuff uninformed comment to the effect that there is a glut, to use terminology that appears in some of the publications, a glut on the market of Ph.D.'s.

Single instances: For example, a taxidriver who holds a Ph.D. being viewed as representative of the total doctoral population. Such an attitude we feel has permeated the public, and until we can reeducate the public in terms of the facts as they exist, perhaps some excesses in certain areas will continue. Nevertheless, the long-range needs as we have heard referred to by Dr. Heyns at lunch yesterday, and this morning by Joel Snow, reiterating the anticipated large demand for differently trained individuals at this high level is prevalent. So again I think it is a matter of more properly informing our colleagues outside of the field of graduate education on the problem as we see it.

Dr. Appley, Massachusetts. I would like to endorse this very strongly. I would ask that Mike add a "Whereas" having to do with scholarships and creative arts. This does indeed address the research in the interest of national need, but it leaves out the idea of a place where grant scholarship can go forward, and I think any statement from this organization should certainly include a comment about the need for continuation of the quiet atmosphere of the sort that may not be immediately productive for national need, and so I would like to endorse this and ask that there be added a "Whereas" program along these lines.

Spurr: I think that the suggestion is an excellent one, sir, but I am not sure that we can technically do so without clearing it first through the Executive Committee. But perhaps we can work this into some supportive language.

Pelczar: I am sure it would be the consensus from several of the committee members here, and if anyone wants to speak to the contrary, they can speak for themselves, but I feel this would be entirely acceptable.

Spurr: May I ask the President to comment on. Can we amend resolutions from the floor, legally?

Dr. Page: I think procedurally it would suffice, and I would very much like the minutes to show that approval of this resolution as presented in no way implies that we are abrogating our right or indeed our duty to pursue research simply because it is not perceived to be of an immediate social impact.

Spurr: Yes. If my parliamentary reading is acceptable, I would rule that any amendment to which no member of the Executive Committee objects can be accepted, because I do believe that the language would imply that any matters to be brought on the floor must be approved by the Executive Committee. We could always, in the case of an emergency, a very great need, adjourn and go into a quick Executive Committee session for this purpose.

If there is no objection raised by any member of the Executive Committee, the chair will entertain the amendment.

Voice: I endorse, I think, what the resolution seeks, but I have real concerns about aspects and circumstances, however, that I must express.

One is that I thought that the Council members of the sovereign body of the Council should have the right to decide the resolution on which to vote, not the Executive Committee, with all deference and respect to its hardworking members.

Secondly, it seems to me that there is another point which I think will raise questions. The remark about uninformed feelings or thoughts or views or conclusions about the so-called Ph.D., I think, is a case in point. There is a surplus of Ph.D.'s in many areas. There is going to continue to be for some time. We have not been the most responsible body in this country. We are vulnerable, and I do not think we can pretend to the contrary.

At the same time, it seems to me that we have to try to present to the public our fresh sense of responsibility and purpose and concern, our awareness of needs of the country, intellectually as well as in the applied areas of research. I do not feel the two can or should be separated.

Finally, it is enormously difficult, it seems to me, for us to discuss a resolution if we do not have it before us physically. I mean, physically on paper.

Resolution pasted by voice vote.

Spurr: Presumably, an appropriate amendment is agreed to by the CPPR Committee and the Executive Committee, involving the sense of the suggestions.

I understand that the graduate cost committee has a resolution to offer. This has also been approved by the Executive Committee.

Dr. Deener: This is a very short resolution and I think when I read it you will see the import of it.

RESOLUTION

BE IT RESOLVED as a matter of policy by the Council of Graduate Schools in this annual meeting assembled that the cost of research activity involving graduate faculty and/or graduate students should be included wholly or an appropriate part as one of the costs of graduate education irrespective of the source of funds which are used to pay such research costs.

This is essentially the position that has been expressed in the commentary that we are preparing. It is designed really to see if the graduate dean is willing to take a position or whether this is the proper position in response to those efforts which would split the activities of a university into instruction, research, and public service.

Resolution passed by a voice vote.

I am moving adoption of this with the approval of the Executive Committee.

Spurr: The amendments to the constitution may be proposed by the Executive Committee or by written petition of one-third of the members. However, they originate, or I should say proposals for amendments shall be received by the Executive Committee and forwarded with recommendations to the members in writing at least 90 days before the meeting which they are to be voted upon. To be adopted they must receive a two-thirds majority of the members voting. The Executive Committee proposes, therefore, an amendment to delete Article 5 which states:

> The Executive Committee, acting as a nominating committee, shall propose a nominee for each position at large to be filled. Other nominees may be proposed from the floor. The nominee receiving the largest number of votes for an unfilled position shall be declared elected.
>
> And to substitute a new Article under Article 8 which states as follows:
>
> In addition to the Executive Committee, there shall be (1) a Nominating Committee, (2) a Committee on Membership, whose members shall not be members of the Executive Committee, and (3) such other standing committees as may be established by the Executive Committee.
>
> Except for the Nominating Committee, all standing committees and *ad hoc* committees shall be appointed by the Chairman with the advice and consent of the Executive Committee.

> The Nominating Committee shall consist of 5 members of whom 3 shall be elected each year by the Council at its annual meeting, and 2 shall be the members-at-large of the Executive Committee who are completing their terms. The Chairman shall be elected by the Committee.
>
> At least two weeks before each annual meeting of the Council, the Nominating Committee shall propose to the members of the Council two nominees for members-at-large of the Executive Committee and three nominees for members of the Nominating Committee. These nominations shall be made only after nominations accompanied by supporting statements have been solicited from the membership-at-large.
>
> At the annual meeting, additional nominees may be proposed from the floor. The nominees receiving the largest number of votes for the positions to be filled shall be declared elected.
>
> The first Nominating Committee established under this article shall consist of three members of the Council appointed by the Executive Committee and the two members of the Council who have most recently completed their terms as members-at-large of the Executive Committee.

Now, we are in something of a box. We have not submitted this 90 days in advance of the meeting. We do not believe, therefore, that we could legally take action at this time. But if there is no objection from the floor, we will assume that we can take this action by mail ballot 90 days from this time. So if there is no objection from the floor, the Executive Committee believes that it can by some stretch of interpretation of the constitution authorize a mail ballot by all CGS members, after written notation to all CGS members and after a 90-day delay can request a vote.

Voice: Could that provision be put into the proposal from the Executive Committee? It seems to me that it is perfectly valid for us to vote on that. We are accepting your proposal, is that correct? Or were you not proposing that to be voted on?

Spurr: No. If there is no objection we will have a mail ballot on this issue in 90 days.

Voice: Do you want to vote on that? I would so move.

Spurr: I think that would be quite appropriate for the chair to entertain a motion to authorize a mail ballot 90 days after this meeting on this matter.

You are now authorizing the president and the Executive Committee to conduct the mail ballot on this constitutional amendment not sooner than 90 days from the present time.

Page: The implication then, as I interpret it, is that this would be the procedure to be followed at the election at the next annual meeting. Otherwise, no action can be taken until the next annual meeting.

Spurr: Yes. The new Executive Committee will appoint a Nominating Committee. The Nominating Committee will solicit nominations through the newsletter and otherwise and will submit a panel not less than two weeks in advance of the next annual meeting.

Voice: Isn't it necessary to circulate to the entire membership and count the 90 days from that date?

Spurr: Yes. That is my understanding. We will have to circulate it and allow 90 days before a vote is called for. We can circulate it probably through a newsletter and then have a vote at least 90 days after the distribution of the newsletter.

Spurr: The question is to authorize the Executive Committee to authorize a mail ballot on this amendment.

Passed by a voice vote.

Page: It occurred to me just this minute, I think the last part of that gives the instruction as to what will be done this first year. It seems to me that does not need to be added permanently in the constitution.

Spurr: No. If there is no objection to that, we can put this into a permanent form and the motion can deal with it.

Voice: I am not sure where we stand momentarily. I would like to raise a question as to what I see is a difference in terminology. The third paragraph of your proposal says that two members shall be members of the Executive Committee who are completing their term, whereas, the final paragraph says two members shall be members of the Council who have most recently completed their term. In one case they will not be members of the Executive Committee and in the other case they are members of the Executive Committee.

Voice: That is because there is a special mechanism for doing it the first time.

Voice: I do not understand the necessity for the special mechanism.

Voice: It seems to me we are not going to be able to do it until 1974, if it has to come up – I am sorry – 1973. If we have to take it up before the 1972 meeting, this is just a way of getting it done.

Deener: When this goes into permanent effect, the election would take place and the two members would not have actually been retired by the time they are put into nomination, whereas, since this last action will be taken after the annual meeting, those two members will have retired at this meeting. That is the only reason for the difference. Next December the two people whose term expires in December will serve through to the end of the business meeting, and those are the two who would go off the Council and go on the new committee. But we are talking now about people who will go off today, and those would be the two who would go on the special committee. So they will have completed their term.

Spurr: I think that is good. That makes sense to me.

Well, we are faced with the issue that we do have two members of the Executive Committee retiring as of this morning. These are Ed Eigel, St. Louis University, and Carroll Miller from Howard University. The continuing members of the Executive Committee are Jacob Cobb of Indiana State University and Philip Rice of Claremont University Center, both retiring in 1972, Elizabeth Foster of Bryn Mawr, and Robert Wolverton of Miami University, with terms expiring in

1972. The chairman will be at the close of this meeting Dean Deener. I will continue as past chairman without vote for the following year, and we will, of course, have a new chairman-elect.

Spurr: I am without vote because I am no longer an institutional representative. If I want to vote I can get my own graduate dean out, and then I become an institutional representative, and then I retain my membership in CGS. But the past chairman needs only to be a person who has been an institutional member. With this in mind, the Executive Committee has already been told by President Rees. These nominations are placed in front of you, and as called for yesterday, nominations from the floor are in order.

From the floor Don Stokes and John Turin were nominated and seconded.

Spurr: We now have four nominations, then: Dean Kubzansky of Boston University, Dean Mariella of Loyola of Chicago, Dean Stokes of the University of Michigan, and Dean Turin of Toledo University. You may all vote for two.

Voice: In the case of the two who were suggested yesterday, each has been contacted and has agreed to run.

Ballots were then called for and the collecting and the counting of ballots took place as the meeting continued.

NEW BUSINESS

Dr. Canfield, Drake University: I am not sure this is new business, but did we really resolve the issue of being able to amend the resolution?

Spurr: I ruled we could unless there was some objection from the Executive Committee.

Voice: I would move that this be explored between now and the next annual meeting.

Spurr: I do need clarification on that. I cannot conceive the Executive Committee objecting. I am bound by the constitution before us.

Dr. Van Perkins, University of California Riverside: The questions of amending does, it seems to me, raise a very serious question. If in fact the CGS is not the policy-making body for the organization, if in fact amendments must be channeled through the Executive Committee, then that strikes me as the most ridiculous kind of procedure. In that regard, I take rather seriously the objection expressed last night and expressed again this morning about the absence of presentation of resolutions prior to action.

Obviously, the Executive Committee is busy. Obviously, the Executive Committees of other professional organizations far larger than this one, far more hard pressed by their membership in terms of internal unrest, and those kinds of considerations, have in fact reformed their procedures to make it possible for more meaningful action to take place on the floor.

And I should like to move at this time that the Executive Committee take under consideration a revision of the constitution to take into account those kinds of concerns and see if we cannot get more timely and meaningful information so that we can act more effectively at the business meeting.

Spurr: I think your comments are quite apropos, and the Executive Committee will undertake to do so.

Page: I do recall now some earlier discussions in the Executive Committee, and I think you did put your finger on it. The Constitution has not been brought up-to-date because in the early days the Executive Committee was the Resolutions Committee, in effect, and with the appointment of CPPR, which has made the Resolutions Committee, that has not been reflected in the constitution. So I think your point is very well taken. That needs to be reflected if in fact that committee would then have the responsibility for clearing these as was intended in the earlier instruction.

Van Perkins: At the risk of prolonging thus unduly, I would like to make it clear that that was in fact a motion, and I would like to make it more specific: That the Executive Committee be charged with that responsibility and be instructed to report to the membership in time so that we can act more effectively at the business meeting.

Spurr: If you want to be a parliamentarian, sir, I will have to rule you out of order, because you are bound by the officers who act by constitution. And as I read the constitution, no action may be taken until the Executive Committee has had an opportunity to make a recommendation.

I assure you that I concur with your opinion. I assure you that I think that the majority of the Executive Committee agrees with you and will take action. But we are bound, as your officers, by the constitution you have imposed upon us. And we will, I assure you, undertake to make recommendations to change the constitution which binds us. And if in that anyone is not satisfied, they may bring through the amendment policy changes in the constitution.

Is there any objection to authorizing us to include such matters in the mail ballot 90 days hence?

If there is no objection, I will assume that the Executive Committee has that authority.

The next meeting of the CGS will be in 1972 at New Orleans, in 1973 at Colonial Williamsburg. The dates are the first week in December. Generally speaking, the first Thursday, Friday, and Saturday in December.

I would like at this time to express appreciation to a number of people, but two of them particularly come to mind, who are leaving the ranks of the Council of Graduate Schools and who are extremely effective in this organization. They are our immediate past chairman, Dr. Mina Rees, who is retiring at the end of this year, and she has been an invaluable leader in this organization; and also Carroll L. Miller, Graduate Dean of Howard University, is leaving the Executive Committee after long service, and I think we owe him a particular acknowledgement.

At this time, I would like to announce the incoming chairman-elect. I think you all know Dean George Springer of the University of New Mexico, and I invited George to come up and join us at the podium.

I would like at this time now to turn over the gavel to the new chairman. It is really a very handsome gavel. It is dated 1961. It has been used now 10 years by the chairman of this organization, and by turning this over to Dave Deener, I welcome him as your new Chairman.

Deener: I understand that the new Chairman should adjourn the meeting, which I will proceed to do.

Voice: Since our preceding chairman cannot include himself among those who he just mentioned, Carroll Miller and Mina Rees, I would like to include him. He also is going to a new job, and, even though he is staying on the Executive Committee, I think we owe him a vote of thanks for his services.

Deener: As a result of the ballot, Kubzansky and Mariella have been elected.

Deener: Before I do adjourn, though, one of the sessions we are trying out in experiment is the one immediately following this which will be informal but open to try to get some idea as to what the next program should be like or any future activities of the Council, and I hope those who have ideas will stay.

The new program chairman is the chairman-elect, Dean Springer, and he will preside over that session.

If there is no further business, I declare this meeting adjourned.

The Council of Graduate Schools in the United States
Washington, D.C.

Statement of Income and Expenses
For the Year Ended December 31, 1971

INCOME			
Dues–1971			$109,200.00
Interest			11,370.38
Sales of Publications			2,527.05
Administrative Fees from Consultations			6,050.00
Grants–National Science Foundation			36,000.00
Sale of Used Furnishings and Equipment			75.00
Annual Meeting			6,980.00
Salary Reimbursement			2,789.34
TOTAL INCOME			**$174,991.77**
Deduct:			
EXPENSES			
Salaries		$ 62,550.76	
Employees' Benefits		12,929.69	
Payroll Taxes		1,906.88	
Rent		8,931.96	
Telephone		1,399.42	
Office Supplies and Expenses		803.27	
Postage and Mailing		2,087.56	
Printing and Duplicating (Including Publications)		8,092.25	
Dues		978.00	
Insurance and Bonding		391.00	
Subscriptions and Publications		391.01	
Personal Property Taxes		140.23	
Travel			
Staff	$ 2,432.72		
Committees	8,139.13	10,571.85	
Meetings			
Annual Meeting	$ 4,439.23		
Summer Workshop	1,939.00		
Business and Committee	1,384.47	7,762.70	
Wilson–Bloland Study		920.00	
Contribution–The Gustave O. Arlt Award Fund		1,000.00	
Furniture and Equipment		332.18	
Miscellaneous		579.76	
Expenditures from Grants			
National Science Foundation	$ 38,880.00		
Carnegie Corp. of New York	5,227.94	44,107.94	
TOTAL EXPENSES			**165,876.46**

EXCESS OF INCOME OVER EXPENSES			$ 9,115.31
Deduct:			
Decrease in Unremitted Payroll Deductions			
December 31, 1970	$ 2,937.40		
December 31, 1971	1,631.41	$ 1,305.99	
Increase in Unreimbursed Consultations and Expenses			
December 31, 1971	$ 10,311.98		
December 31, 1970	7,722.65	2,589.33	3,895.32
Net Increase in Cash and United States Treasury Bills			$ 5,219.99
Balance January 1, 1971 (Cash and United States Treasury Bills)–Per Prior Audit Report			174,314.14
BALANCE DECEMBER 31, 1971 (Cash and United States Treasury Bills)			$179,534.13

ACCOUNTED FOR AS FOLLOWS:

Cash			
On Deposit–The Riggs National Bank of Washington, D.C.			
Checking Account	$ 7,559.60		
Time Deposit, Due 12/21/72	100,000.00	$107,559.60	
Savings Accounts–National Permanent Federal Savings and Loan Association		42,776.53	
Petty Cash		50.00	
		$150,386.13	
$30,000.00 United States Treasury Bills, Due 2/03/72–At Cost		29,148.00	$179,534.13

NOTE: This exhibit reflects the cash receipts and disbursements method of accounting.

Officers and Committees

For the year following the December 1971 meeting

Executive Committee

David R. Deener, Tulane University (Chairman)
Stephen H. Spurr, University of Texas at Austin (Past Chairman)
George P. Springer, University of New Mexico (Chairman-Elect)
Jacob E. Cobb, Indiana State University (1972)
Philip M. Rice, Claremont Graduate School (1972)
Elizabeth R. Foster, Bryn Mawr College (1973)
Robert E. Wolverton, Miami University (1973)
Philip E. Kubzansky, Boston University (1974)
Raymond P. Mariella, Loyola University (1974)
J. Boyd Page, Council of Graduate Schools, *ex officio*

Membership Committee

Earle L. Canfield, Drake University (Chairman) (1973)
Robert M. Bock, University of Wisconsin (1972)
Charles A. Leone, Bowling Green State University (1974)

Committee on Policies, Plans, and Resolutions

Michael J. Pelczar, University of Maryland (Chairman) (1973)
Michael J. Brennan, Brown University (1972)
Elizabeth R. Foster, Bryn Mawr College (1972)
Robert B. Toulouse, North Texas State University (1972)
Robert F. Kruh, Kansas State University (1973)
George P. Springer, University of New Mexico (1973)

Joint Committee on Accreditation

Jacob E. Cobb, Indiana State University
Joseph L. McCarthy, University of Washington
J. Boyd Page, Council of Graduate Schools, *ex officio*

Committee on Nondegree and Other Postbaccalaureate Programs

Norman N. Durham, Oklahoma State University (Chairman) (1974)
George G. Mallinson, Western Michigan University (1972)
Daniel J. O'Kane, University of Pennsylvania (1973)
James E. Gregg, California State University, Chico (1974)
Mary E. Huey, Texas Woman's University (1974)

CGS Members of the Graduate Record Examinations Board

Allen F. Strehler, Carnegie-Mellon University (1973)
David R. Deener, Tulane University (1974)
Robert H. McFarland, University of Missouri at Rolla (1974)
Michael J. Pelczar, University of Maryland (1974)

(The Graduate Record Examinations Board consists of this Committee, along with four representatives named by the Association of Graduate Schools, and eight elected at large by the appointed representatives.)

AFGRAD Executive Deans Committee

Gustave O. Arlt, University of California, Los Angeles (Chairman)
Robert H. Baker, Northwestern University
Carroll L. Miller, Howard University
Herbert D. Rhodes, University of Arizona
Philip M. Rice, Claremont Graduate School
S. D. Shirley Spragg, University of Rochester
Robert D. Stout, Lehigh University
Phyllis W. Watts, California State University, Fresno

(Members of this Committee are appointed by the President of the African-American Institute upon nomination by the President of CGS.)

Advisory Committee to the Institute of International Education

J. Boyd Page, Council of Graduate Schools, *ex officio* (Chairman)
Sanborn C. Brown, Massachusetts Institute of Technology (1972)
George H. Huganir, Temple University (1972)
Francis M. Boddy, University of Minnesota (1973)
Allen G. Marr, University of California, Davis (1973)

Committee on Admissions and Advanced Standing

Andrew J. Hein, University of Minnesota (Chairman) (1973)
David S. Sparks, University of Maryland (1972)
Robert E. Wolverton, Miami University (1972)
Henry C. Torrey, Rutgers University (1973)
Joseph A. Pittman, North Carolina Central University (1974)

Committee on Research

Dale C. Ray, Georgia Institute of Technology (Chairman) (1973)
John A. Dillon, University of Louisville (1972)
Mark C. Ebersole, Temple University (1974)

Committee on the Preparation of College Teachers

Alvin H. Proctor, Kansas State College of Pittsburg (Chairman) (1973)
James F. Hornig, Dartmouth College (1972)
Charles T. Lester, Emory University (1972)
Philip M. Rice, Claremont Graduate School (1972)
Eugene Arden, Long Island University (1973)
Jacob E. Cobb, Indiana State University (1973)

Committee on Financial Aid for Graduate Students

Francis M. Boddy, University of Minnesota (Chairman) 1972)
S. D. Shirley Spragg, University of Rochester (1972)
Max Goodrich, Louisiana State University (1973)
Phyllis Lachs, Bryn Mawr College (1974)
Donald White, Boston College (1974)

Committee on Disadvantaged Students

Edwin L. Lively, University of Akron (Chairman) (1973)
I. Wesley Elliott, Fisk University (1972)
Oscar Zeichner, City College of the City University of New York (1972)
Ralph Lewis, University of Michigan (1973)
James Finlay, Fordham University (1974)
Kathryn McCarthy, Tufts University (1974)

Committee on Graduate School Governance and Administration

John K. Major, New York University (Chairman) (1972)
Frederick N. Andrews, Purdue University (1973)
Otis H. Shao, University of the Pacific (1973)
Thomas C. Rumble, Wayne State University (1974)

Committee on Costs of Graduate Education

David R. Deener, Tulane University (Chairman)
Wayne C. Hall, State University of New York at Binghamton
Thomas D. Jarrett, Atlanta University
Franklin P. Kilpatrick, University of Delaware
Joseph L. McCarthy, University of Washington
J. Boyd Page, Council of Graduate Schools, *ex officio*
Allan Tucker, State University System of Florida
Robert H. Wessel, University of Cincinnati

Gustave O. Arlt Award Fund Advisory Committee

Robert J. Henle, S. J., Georgetown University
Robert C. Predmore, Duke University
Robert E. Wolverton, Miami University

The Constitution of the Council of Graduate Schools in the United States

1. Name

This organization shall be called the Council of Graduate Schools in the United States.

2. Purpose

The Council is established to provide graduate schools in the United States with a comprehensive and widely representative body through which to counsel and act together.

Its purpose is the improvement and advancement of graduate education. The purview of the Council includes all matters germane to this purpose. The Council shall act to examine needs, ascertain best practices and procedures, and render assistance as indicated; it may initiate research for the furthering of the purpose. It shall provide a forum for the consideration of problems and their solutions, and in meetings, conferences, and publications shall define needs and seek means of satisfying them in the best interests of graduate education throughout the country. In this function the Council may act in accordance with the needs of the times and particular situations to disseminate to the public, to institutions, to foundations, to the federal, state, and local governments, and other groups whose interest or support is deemed of concern, information relating to the needs of graduate education and the best manner of satisfying them.

In the analysis of graduate education, in the indication of desirable revision and further development, in the representation of needs and all other functions related to effecting its purpose, the Council not only shall be free to act as an initiating body, but it shall assume direct obligation for so doing.

3. Membership

Institutions applying for membership shall be considered in the light of the following criteria:

a. Applicants for membership must be accredited by the appropriate regional accrediting agency as a college or university approved for the offering of graduate work.

b. Applicants must have conferred at least thirty degrees of Master of Arts or Master of Science or ten Doctor of Philosophy degrees, or appropriate combination, within the three-year period preceding application.

c. The degrees conferred must be adequately distributed over at least three distinct disciplines, such as but not limited to:

agriculture
anthropology
astronomy
bacteriology
biochemistry
botany
chemical engineering
chemistry
civil engineering
classics
economics
electrical engineering
English
entomology
fine arts
French
geography
geology
German
history
mathematics
mechanical engineering
music
pharmacology
philosophy
physics
physiology
political science
psychology
Russian
sociology
Spanish
zoology

The Committee on Membership shall consider all applications in the light of these criteria and make appropriate recommendations to the Executive Committee. The Executive Committee shall take final action on all applications for membership and shall report such action at each Annual Meeting.

The Executive Committee may invite and approve applications by foreign institutions of good standing for affiliation with the Council if such institutions meet all criteria for membership except accreditation by an American regional accrediting agency. Such affiliates will be extended all the courtesies of membership except the privilege of voting.

4. *Voting Power*

In all activities of the Council, each member institution shall have one vote.

More than one representative of any institution may attend the meeting of the Council, but the member's vote shall be cast by the individual designated as the principal representative of the member by the chief administrative officer of the member institution.

5. *Officers and Executive Committee*

The officers of the Council and the Executive Committee shall be a Chairman, a Chairman-Elect, and the immediate Past Chairman, each serving for a term of one year. In the absence of the Chairman, the Chairman-Elect shall be the presiding officer of the Executive Committee and the Council.

There shall be an Executive Committee of nine voting members, composed of the Chairman, the Chairman-Elect, the Past Chairman, and six members-at-large. Two members-at-large shall be elected by the Council at each Annual Meeting for terms of three years each, beginning immediately after the Annual Meeting.

The Chairman-Elect, chosen by the Executive Committee from its own past or present membership, shall serve in that capacity for one year. The following year, he will assume the office of Chairman, and the following year, the office of Past Chairman.

The Executive Committee, acting as a nominating committee, shall propose a nominee for each position at large to be filled. Other nominees may be proposed from the floor. The nominee receiving the largest number of votes for an unfilled position shall be declared elected.

Each voting member of the Executive Committee must be the principal representative of a member of the Council, and none may serve for two consecutive full terms.

If the Chairman is unable to continue in office, the Chairman-Elect shall succeed immediately to the chairmanship, and the Executive Committee shall choose a new Chairman-Elect.

Any vacancies occurring among the membership-at-large of the Executive Committee shall be filled by the Executive Committee until the next Annual Meeting, at which time the Council shall elect a replacement for the balance of the term.

6. *Executive Officers*

The chief executive officer of the Council shall be a President, who shall be a salaried officer, appointed by the Executive Committee and serving at its pleasure. The President shall serve as an *ex-officio* member of the Executive Committee without a vote.

7. *Duties and Powers of the Executive Committee*

In addition to the duties and powers vested in the Executive Committee elsewhere in this Constitution, the Executive Committee may, specifically: employ such staff and establish such offices as may seem necessary; incorporate; undertake itself, or through its agents, to raise funds for the Council and to accept and expend monies for the Council; take initiative and act for the Council in all matters including matters of policy and public statement except where limited by this Constitution or by actions of the Council.

8. *Committees*

In addition to the Executive Committee, there shall be a Committee on Membership, whose members shall not be members of the Executive Committee. This committee shall be appointed by the Chairman with the advice and consent of the Executive Committee.

Other standing committees may be established by the Executive Committee.

Both standing and *ad hoc* committees shall be appointed by the Chairman with the advice and consent of the Executive Committee.

9. *Meetings*

The Council shall hold an Annual Meeting at a time and place determined by the Executive Committee. The Council may meet at other times on call of the Executive Committee.

The Executive Committee shall be responsible for the agenda for meetings of the Council. Reports and proposals to be submitted for action by the Council shall be filed with the Executive Committee before they may be submitted for general discussion by the Council. No legitimate report or proposal may be blocked from presentation to the Council, but action on any proposal may not be taken until the Executive Committee has had an opportunity to make a recommendation.

In matters not provided for in this Constitution, parliamentary procedure shall be governed by *Robert's Rules of Order, Revised.*

10. Limitation of Powers

No act of the Council shall be held to control the policy or line of action of any member institution.

11. Dues

Membership dues shall be proposed by the Executive Committee and must be approved by the majority of the membership after due notice.

12. Amendments

Amendments to this Constitution may be proposed by the Executive Committee or by written petition of one-third of the members. However they originate, proposals for amendment shall be received by the Executive Committee and forwarded with recommendations to the members, in writing, at least ninety days before the meeting at which they are to be voted upon. To be adopted, proposed amendments must receive the approval of a two-thirds majority of the members voting at the announced meeting.

13. Bylaws

Bylaws may be established by the Executive Committee at any regular or special meeting, subject to ratification by a simple majority vote of the Council at the next Annual Meeting.

BYLAWS

1. In conformity with Article 6 of the Constitution, the President of the Council of Graduate Schools in the United States shall be paid an annual salary to be determined by the Executive Committee plus such perquisites as may be necessary for the proper conduct of the office and such travel as may be deemed essential. The President is authorized to employ such additional personnel as is, in his judgment, necessary for the proper conduct of the office, to establish bank accounts in the name of the Council of Graduate Schools in the United States, and to draw checks and invest monies against

the Council's account or accounts, subject to an annual audit of the books of the Council by a Certified Public Accountant and approval by the Executive Committee.

2. The Riggs National Bank of Washington, D.C., is hereby designated a depositary for the funds of this association and the said bank is hereby authorized and directed to pay checks and other orders for the payment of money drawn in the name of this association when signed by the President and the said bank shall not be required, in any case, to make inquiry respecting the applications of any instrument executed in virtue of this resolution, or of the proceeds therefrom, nor be under any obligation to see to the application of such instrument of proceeds.

3. In the event of the dissolution of the Council of Graduate Schools, all then existing assets of the Council shall be distributed in equal parts to the institutions which will at that time be members of the Council.

4. After January 1, 1969, the fiscal year of the Council of Graduate Schools in the United States will correspond to the calendar year. (Prior to this date, the fiscal year ran from April 1 through March 31.)

5. In the event of the death or disability of the President of the Council, the Chairman shall immediately call a meeting of the Executive Committee to select an Acting President, who shall assume the responsibilities of the President, as they are specified in Article 6 of the Constitution and in Bylaws 1 and 2, until the appointment of a new President.

PROCEDURAL POLICIES

1. Annual meetings of the Council shall be held during or near the first week of December.
2. If a member resigns, it must reapply for admission in the normal way if it wishes to resume membership.
3. Membership or affiliation, with or without vote, of non-academic institutions, associations, or foundations is undesirable.
4. Institutions accepted to membership prior to September 1 in any given year are required to pay dues for that fiscal year.

The Council of Graduate Schools in The United States

Member Institutions

Abilene Christian College
Adelphi University
Air Force Institute of Technology
Alfred University
*American University
Andrews University
Appalachian State University
Arizona State University
Atlanta University
Auburn University

Ball State University
Baylor College of Medicine
Baylor University
*Boston College
Boston University
Bowling Green State University
Bradley University
*Brandeis University
Brigham Young University
Brooklyn College of the
  City University of New York
*Brown University
*Bryn Mawr College

*California Institute of Technology
California State College at Fullerton
California State College at Hayward
California State College at
  Long Beach
California State College at
  Los Angeles
Canisius College
*Carnegie-Mellon University
*Case Western Reserve University
*Catholic University of America
Central Michigan University
Central Missouri State College
Central Washington State College
Chicago State University
Chico State College
The City College of the
  City University of New York
The City University of New York
*Claremont Graduate School
*Clark University
Clarkson College of Technology
Clemson University
Colgate University
College of the Holy Names
College of Saint Rose
College of William and Mary
Colorado School of Mines
Colorado State University
*Columbia University
Connecticut College
*Cornell University
Creighton University

Dartmouth College
De Paul University
Drake University
Drexel University
*Duke University
Duquesne University

East Carolina University
East Tennessee State University
East Texas State University
Eastern Michigan University
*Emory University

Fisk University
Florida Atlantic University
*Florida State University
*Fordham University
Fort Hays Kansas State College
Fresno State College

George Peabody College
*George Washington University
*Georgetown University
Georgia Institute of Technology
Georgia State University

Hahnemann Medical College &
Hospital of Philadelphia
*Harvard University
Hofstra University
Howard University
Hunter College of the
City University of New York

Idaho State University
*Illinois Institute of Technology
Illinois State University
Immaculate Heart College
Indiana State University
*Indiana University
Indiana University of Pennsylvania
*Iowa State University

John Carroll University
*Johns Hopkins University

Kansas State College of Pittsburg
Kansas State Teachers College
*Kansas State University
Kent State University

Lamar University
*Lehigh University
Loma Linda University
Long Island University
*Louisiana State University
Louisiana State University
in New Orleans
Louisiana Tech University
Lowell Technological Institute
*Loyola University
Loyola University of Los Angeles

Mankato State College
Marquette University
*Massachusetts Institute of
Technology
Medical College of Georgia
Medical College of Virginia
Memphis State University
Miami University
*Michigan State University
Michigan Technological University
Middle Tennessee State University
Mississippi College
Mississippi State University
Montana State University
Montclair State College
Morgan State College
Murray State University

Naval Postgraduate School
New Mexico Institute of Mining
and Technology
New Mexico State University
*New School for Social Research
*New York University
Newark College of Engineering
Niagara University
North Carolina Central University
*North Carolina State University
at Raleigh
North Dakota State University
North Texas State University
Northeast Louisiana State College
Northeastern Illinois State College
Northeastern University
Northern Illinois University
Northwestern State University
*Northwestern University

Oakland University
*Ohio State University
Ohio University
*Oklahoma State University
Old Dominion University
*Oregon State University

Pacific Union College
*Pennsylvania State University
Pepperdine University
*Polytechnic Institute of Brooklyn

Pratt Institute
*Princeton University
*Purdue University

Queens College of the
City University of New York

*Rensselaer Polytechnic Institute
*Rice University
*Rockefeller University
Roosevelt University
*Rutgers, The State University

Sacramento State College
*Saint John's University
*Saint Louis University
Saint Mary's University
Sam Houston State University
Samford University
San Diego State College
San Fernando Valley State College
San Francisco State College
San Jose State College
Seattle University
Seton Hall University
South Dakota State University
Southern Illinois University
Southern Illinios University
at Edwardsville
Southern Methodist University
Southwest Texas State University
*Stanford University
State University College of
Arts & Science at Geneseo
State University of New York
at Albany
State University of New York
at Binghamton
*State University of New York
at Buffalo
State University of New York–
Downstate Medical Center
State University of New York at
Stony Brook
Stephen F. Austin State University
Stetson University
Stevens Institute of Technology
*Syracuse University

*Temple University
Tennessee Technological University
*Texas A&M University
Texas Christian University
Texas Southern University
Texas Tech University
Texas Woman's University
Thomas Jefferson University
Trinity University
*Tufts University
*Tulane University
Tuskegee Institute

United States International
University
Utah State University

*Vanderbilt University
Villanova University
*Virginia Polytechnic Institute

Wagner College
*Washington State University
*Washington University
*Wayne State University
Wesleyan University
West Texas State University
*West Virginia University
Western Illinois University
Western Michigan University
Western State College of Colorado
Western Washington State College
Wichita State University
Winthrop College
Worcester Polytechnic Institute

Xavier University

*Yale University
Yeshiva University

University of Akron
*University of Alabama
University of Alabama in Huntsville
University of Alabama at Birmingham
University of Alabama at Huntsville
*University of Arizona
University of Arkansas
*University of California at Berkeley
University of California at Davis
University of California at Irvine
*University of California at Los Angeles
University of California at Riverside
University of California at San Diego
University of California at Santa Barbara
*University of Chicago
*University of Cincinnati
*University of Colorado
*University of Connecticut
University of Dayton
*University of Delaware
*University of Denver
University of Detroit
*University of Florida
University of Georgia
University of Hawaii
University of Houston
University of Idaho
*University of Illinois
University of Illinois at Chicago Circle
*University of Iowa
*University of Kansas
*University of Kentucky
University of Louisville
University of Maine
*University of Maryland
*University of Massachusetts
University of Miami
*University of Michigan
*University of Minnesota
University of MIssissippi
*University of Missouri at Columbia
University of Missouri at Kansas City
University of Missouri at Rolla
University of Montana
*University of Nebraska
University of Nebraska at Omaha
University of Nevada
University of New Hampshire
University of New Mexico
*University of North Carolina at Chapel Hill
University of North Carolina at Greensboro
*University of North Dakota
University of Northern Colorado
University of Northern Iowa
*University of Notre Dame
*University of Oklahoma
*University of Oregon
University of the Pacific
*University of Pennsylvania
*University of Pittsburgh
University of Rhode Island
University of Richmond
*University of Rochester
University of San Francisco
University of Santa Clara
University of Scranton
University of South Carolina
University of South Dakota
University of South Florida
*University of Southern California
University of Southern Mississippi

University of Tennessee Medical Units
*University of Tennessee System
*University of Texas
University of Toledo
University of Tulsa
*University of Utah
University of Vermont
*University of Virginia
*University of Washington
*University of Wisconsin
University of Wisconsin-Milwaukee
*University of Wyoming

**Founding institutions.*